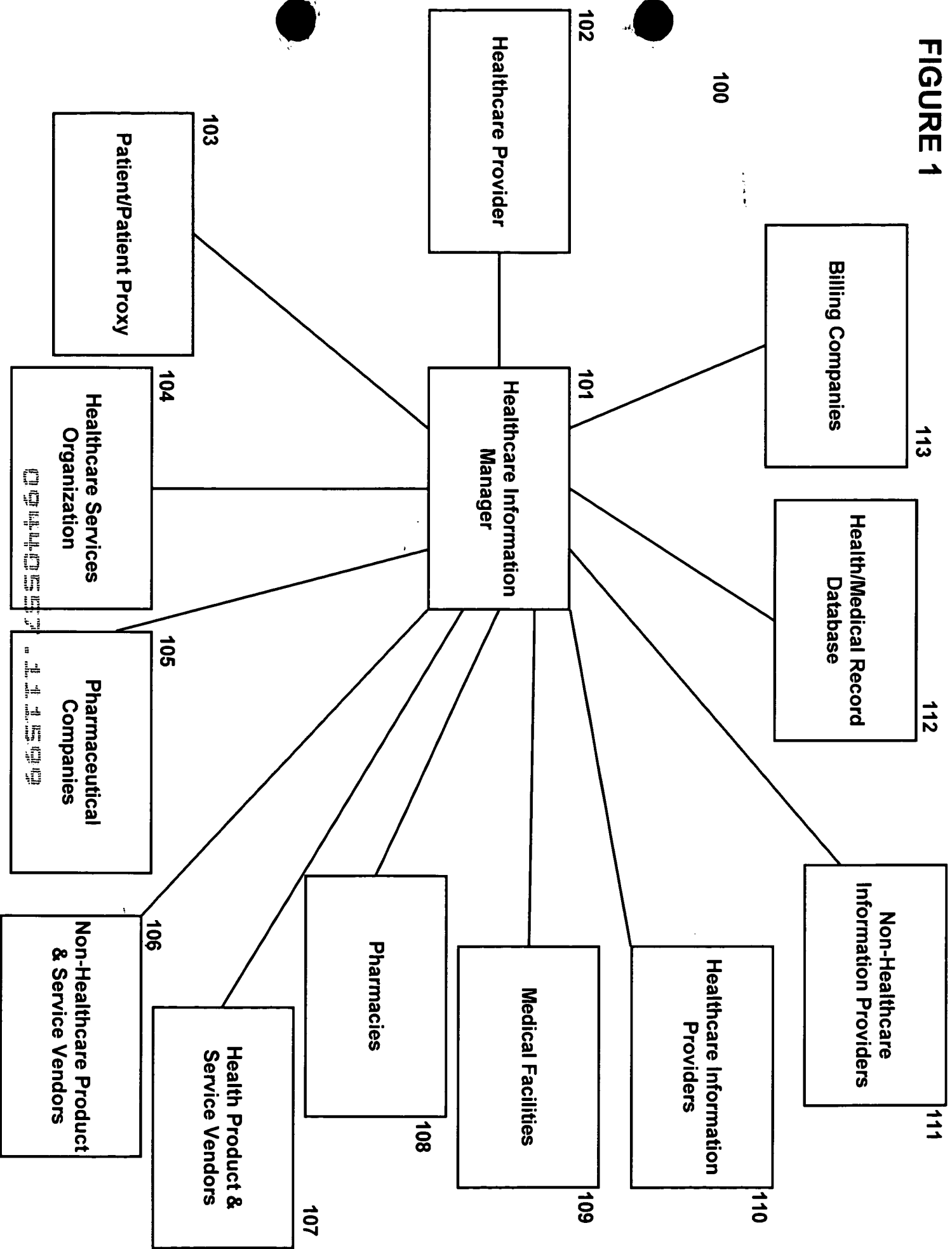


**FIGURE 1**



<b>Healthcare Provider:</b>	<b>Patient:</b>	<b>Healthcare Services Management Systems</b>	<b>Pharmaceutical Companies</b>
Physician Physician office staff & Hospital staff Nurse Respiratory Therapist EMT/EMT-P (paramedic) Technical Assistant Front office personnel (receptionist, etc.) Physician Assistant (PA) Certified Registered Nurse Practitioner (CRNP) Certified Registered Nurse Midwife Certified Medical Assistant (CMA)	Patient Patient Proxy Relative Executor Guardian Healthcare provider	HMOs (Health Management Organizations and other Insurers) PBMs (Pharmacy Benefit Managers/Management Companies) PPMs (Physician Practice Managers/Management Companies) Government Databases (U.S., State, County, City) Medicaid Medicare Hospice systems Commercial Employees who are self-insured Commercial Indemnity Health Insurance Payors PSOS (Provider Sponsored Organizations taking insurance risk & acting as payor Government entities	Manufacturers Distributors Marketing Companies (including independent, 3 <sup>rd</sup> -party companies representing pharmaceutical companies) Advertising agencies handling pharmaceutical accounts Public relations companies handling pharmaceutical accounts
102	103	104	105

Fig. 2A

FIG. 2A

Non-Healthcare Product & Service Vendors	Health Product & Service Vendors	Pharmacies	Medical Facilities
Financial Institutions Online Trading Companies Retail Merchants Auction Companies Educational Institutions & Companies Non-medical charities Government entities	Non-pharmaceutical product and service manufacturers, distributors, resellers, disease prevention, specific and/or general conditions, illnesses, diseases, injuries Government entities	Retail Pharmacies Chain Independent Mass Merchandising Mail Order Internet-based PBM fulfillment centers Hospital-based Clinic/Outpatient-based	Hospitals Physician Offices Treatment Centers Outpatient Clinics Laboratories Imaging Centers Mobile Testing Facilities Mobile Treatment Facilities Surgery Centers Rehabilitation Clinics Medical Records Centers Occupational Health Centers Cancer Centers Pain Management Centers Hospices Skilled Nursing Facilities Nursing Homes Subacute Hospitals/Facilities Physical Therapy Centers Government Medical Facilities
106	107	108	109

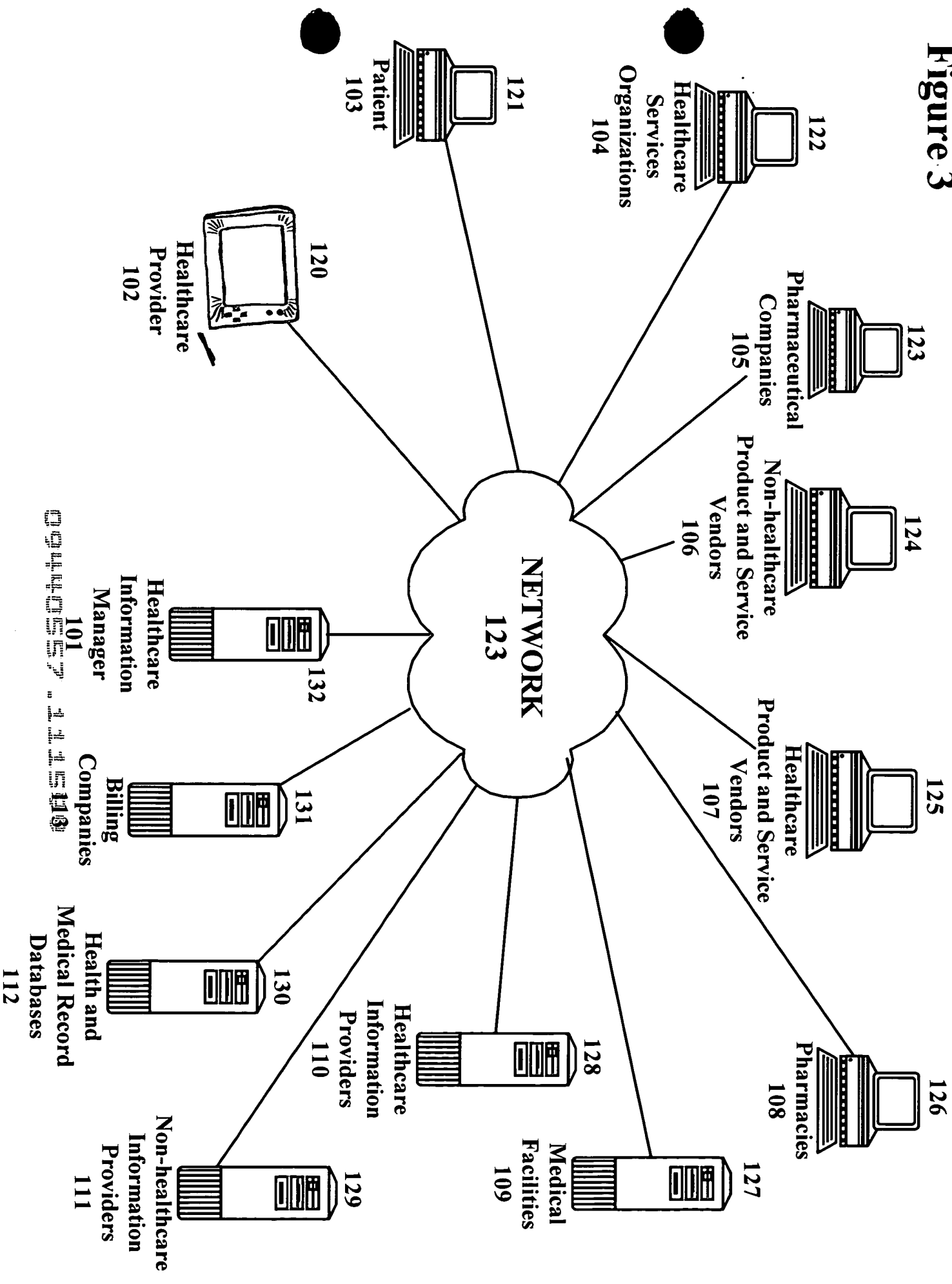
FIG. 2B

09440557 111509

<b>Health Information Providers</b> Health Information Web sites/portals Professional Consumer-oriented 3 <sup>rd</sup> -party information supply companies (e.g. HealthScout) Public Health Institutions National Institutes of Health Centers for Disease Control Charities Non-profit organizations Professional Societies American Medical Society American College of Cardiology	<b>Non-Healthcare Information Providers</b> Consumer reporting companies Price Comparison companies Charitable organizations Information-related Web sites Governmental entities	<b>Health/Medical Record Databases</b> PersonalMD.com drkoop.com MedicalLogic Data Center Record Storage	<b>Billing Companies</b> Medical billers Insurance companies Product billers Third-party transaction companies	<b>Healthcare Information Management System (ReCare Data Center)</b> On-site storage systems On-site processing systems Off-site storage systems Off-site processing systems Third-party storage systems Third-party processing systems Collocated storage systems Collocated processing systems
110	111	112	113	101

Fig. 2C

**Figure 3**



**Healthcare Provider:**

- Patient's Medical Record Information
  - Chief Complaint/Reason for visit
  - PFSH (Past, Family, and Social History)
  - Medications
  - Allergies
  - ROS (Review of Systems)
  - Physical Examination Findings
  - Immunizations
  - Counseling and Health Education
  - Diagnoses
  - Pharmaceutical or other relevant advertisements
  - Relevant health information (journals, articles, news, texts, updates, alerts, etc.)
  - Prompts for sending patient information
  - Lab orders and results
  - Prescription orders, refill requests, refill confirmations, etc.
  - Warnings, alerts, correction requests, clarification requests, change requests
  - Prescription pick-up confirmation
  - Test orders, results, and interpretations
  - EKGs
  - X-rays
  - MRI's
  - CT's
  - Consult information, requests, reports
  - Referral information, requests, reports
  - CME (Continuing Medical Education) information (courses, programs, test evaluations, credits, certificates)
  - Patient-entered topics of interest
  - Formulary information
  - Patient insurance enrollment status
  - Billing and Coding information
  - Personal scheduling information, alerts, etc.
  - Administrative notices
  - Pharmacopoeia information
  - Video (downloadable, live person-to-person/conference)
  - Audio (realplayer, MP3, live person-to-person/conference)

Patient or Proxy:	Healthcare Services Organizations
General Patient Information	Formulary information
Demographics (name, address, phone, email, etc.)	Enrollment information
Employer and occupation information	Regulation information
Name of insurance company and policy or group #	Billing information
Pharmacy selection criteria	Video (downloadable, live person-to-person/conference)
Pharmacy selection	Audio (realplayer, MP3, live person-to-person/conference)
Information related to pharmacy selection (maps, directions)	
Patient's Medical Record Information	
Chief Complaint/Reason for visit	
PFSH (Past, Family, and Social History	
Medications	
Allergies	
ROS (Review of Systems)	
Physical Examination Findings	
Diagnoses	
Pharmaceutical or other relevant advertisements	
Relevant health information (journals, articles, news, texts, updates, alerts)	
Prompts for sending information to others	
Messages from physicians/physician proxies	
Selected lab orders (urinalysis, TB screen, etc.)and results	
Prescription refill requests, refill confirmations, etc.	
Warnings, alerts, correction requests, clarification requests, change requests	
Prescription pick-up confirmation	
Test results and interpretations	
EKGs	
X-rays	
MRIs	
CTs	
Consult information, reports	
Referral information, reports	
Informative programs (medical, healthcare, wellness, exercise, etc.)	
Patient-entered topics of interest	
Formulary information	
Patient insurance enrollment status	
Personal scheduling information, alerts, etc.	
Pharmacopoeia information	
Video (downloadable, live person-to-person/conference)	
Audio (realplayer, MP3, live person-to-person/conference)	

Fig. 4B

<b>Pharmaceutical Companies</b>	<b>Non-Healthcare Product and Service Vendors</b>	<b>Health Product and Service Vendors</b>	<b>Pharmacies</b>
Advertisements Promotional Materials (printable brochures, etc.) White Papers Prescribing information Reports on ad effectiveness, ROI, physician prescribing habits, etc. Warnings and alerts/recalls Journal articles, textbooks (and/or excerpts), etc. Scheduling information Prescribing habits Video (downloadable, live person-to-person/conference, etc.) Audio (realplayer, MP3, live person-to-person/conference)	Financial information Retail information Transaction information Advertisements Educational information	Advertisements Information (product information, service information) Reports on ad effectiveness, ROI, consumer buying habits, etc. Video (downloadable, live person-to-person/conference, etc.) Audio (realplayer, MP3, live person-to-person/conference) Financial information Retail information Transaction information Advertisements Educational information	Advertisements Logos Pharmacy selection and routing information Video (downloadable, live person-to-person/conference, etc.) Audio (realplayer, MP3, live person-to-person/conference, etc.) Prescription information Reports on ad effectiveness, ROI, etc. Alerts/Warnings Requests for clarification, refills, substitutions, etc. Transaction information Compliance reports (e.g. patient pickup information)
<u>503</u>	<u>504</u>	<u>505</u>	<u>506</u>

Fig. 4C



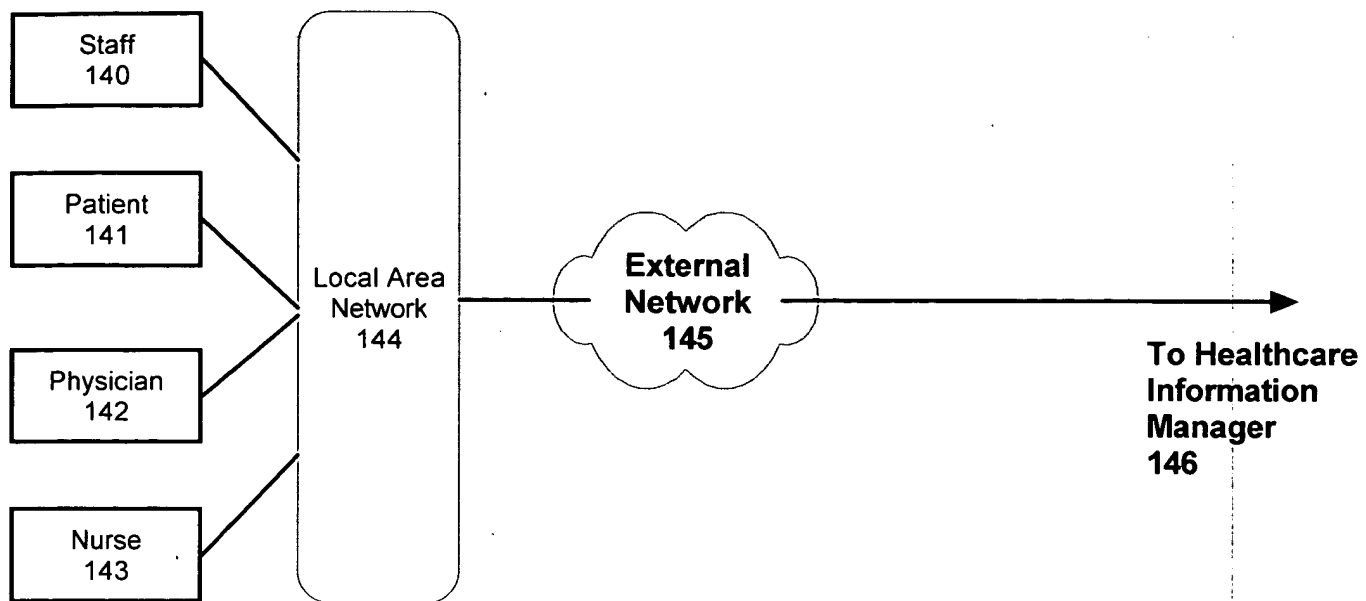
Medical Facilities	Health Information Providers	Non-Healthcare Information Providers
<p>Medical Records</p> <p>Lab orders and reports</p> <p>Prescription orders, refill requests, refill confirmations, etc.</p> <p>Test orders, results, and interpretations (EKGs, MRIs, X-rays, CTs, etc.)</p> <p>Consult information, requests, and reports</p> <p>Referral information, requests, and reports</p> <p>Health information (educational materials, newsletters)</p> <p>Advertisements</p> <p>Insurance information</p> <p>CME (Continuing Medical Education) information</p> <p>Insurance Information</p> <p>Billing Information</p> <p>Video (downloadable, live person-to-person/conference)</p> <p>Audio (realplayer, MP3, live person-to-person/conference)</p> <p>Plus all items listed under Healthcare Provider not explicitly mentioned here.</p>	<p>Health information</p> <p>news</p> <p>articles</p> <p>books</p> <p>video (downloadable, live person-to-person/conference)</p> <p>audio (realplayer, MP3, live person-to-person/conference)</p> <p>Advertisements</p> <p>All items listed in Medical Facilities.</p>	<p>Information</p> <p>News</p> <p>Articles</p> <p>Texts</p> <p>Video (downloadable, live person-to-person/conference, etc.)</p> <p>Audio (realplayer, MP3, live person-to-person/conference, etc.)</p> <p>Advertisements</p> <p>All items listed in Medical Facilities.</p>
507	508	509

Fig. 4D

<b>Health/ Medical Record Databases</b> All items listed under Healthcare Provider.	<b>Billing Companies</b> All items listed under Healthcare Provider and Medical Facilities.	<b>Healthcare Information Manager</b> All items under Healthcare Provider, Patient, Healthcare Services Organizations, Pharmaceutical Companies, Non-Healthcare Product and Service Vendors, Health Product and Service Vendors, Pharmacies, Medical Facilities, Health Information Providers, Non-Healthcare Information Providers, Health/Medical Record Database, and Billing Companies.
<u>510</u>	<u>511</u>	<u>512</u>

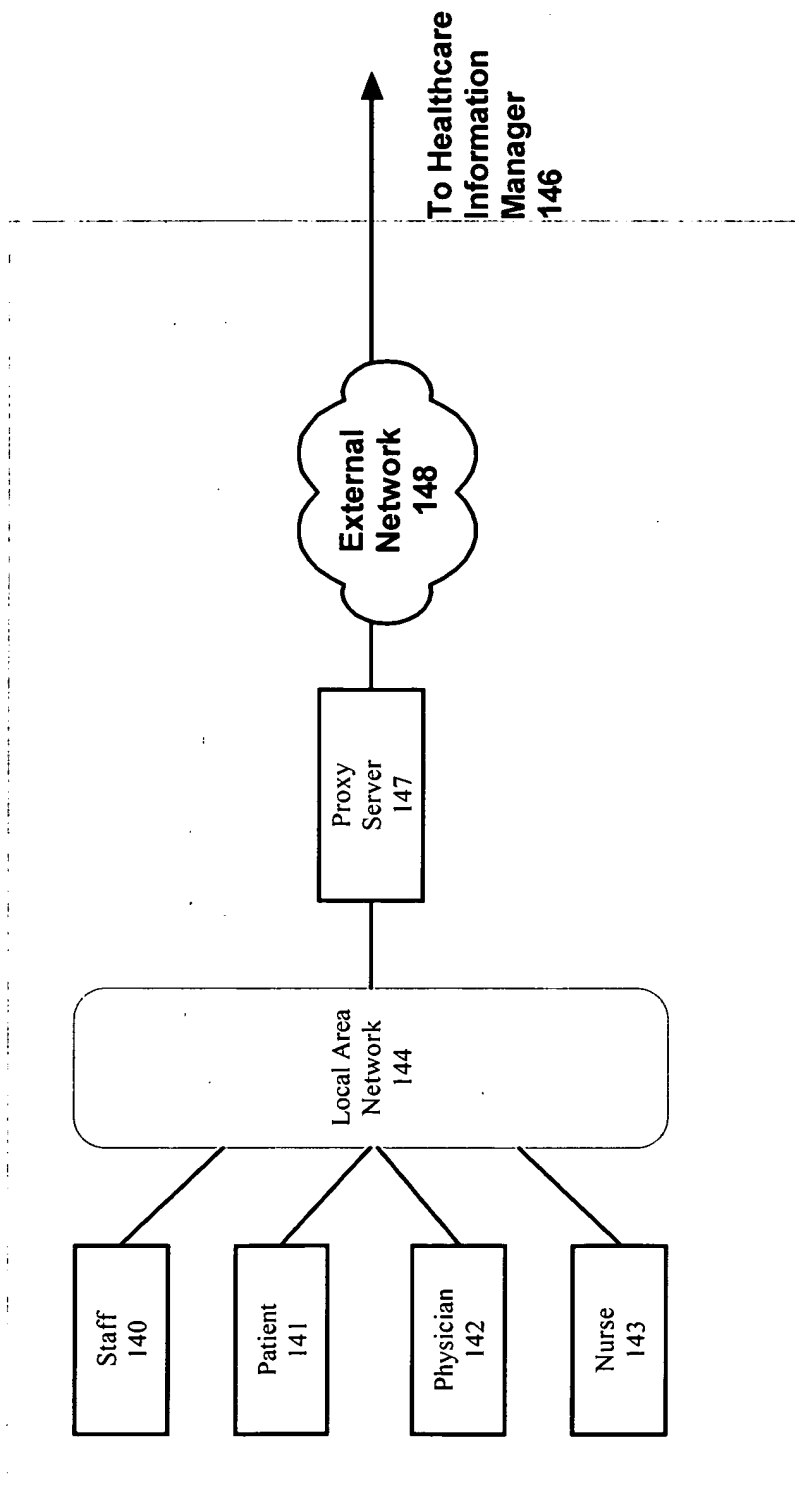
Fig. 4E

**Figure 5A**

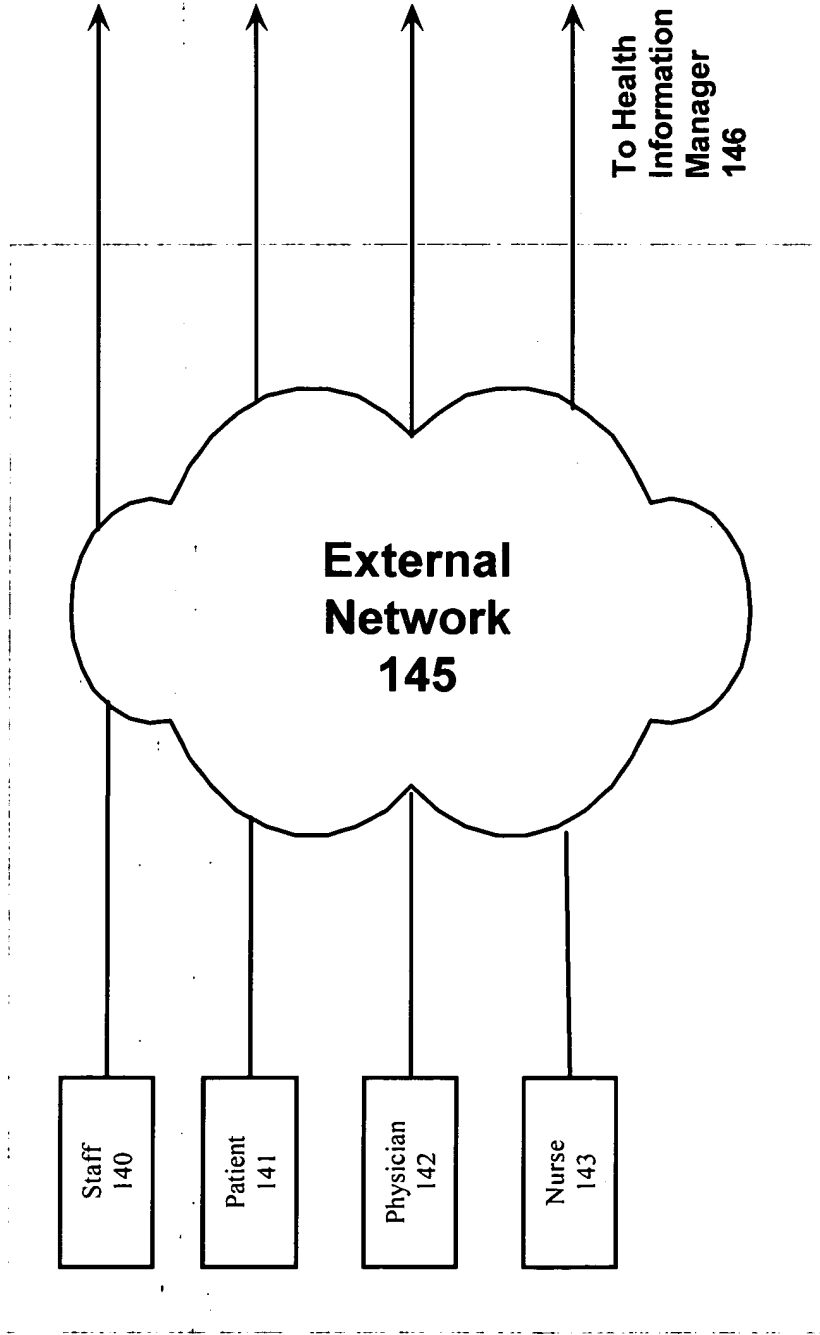


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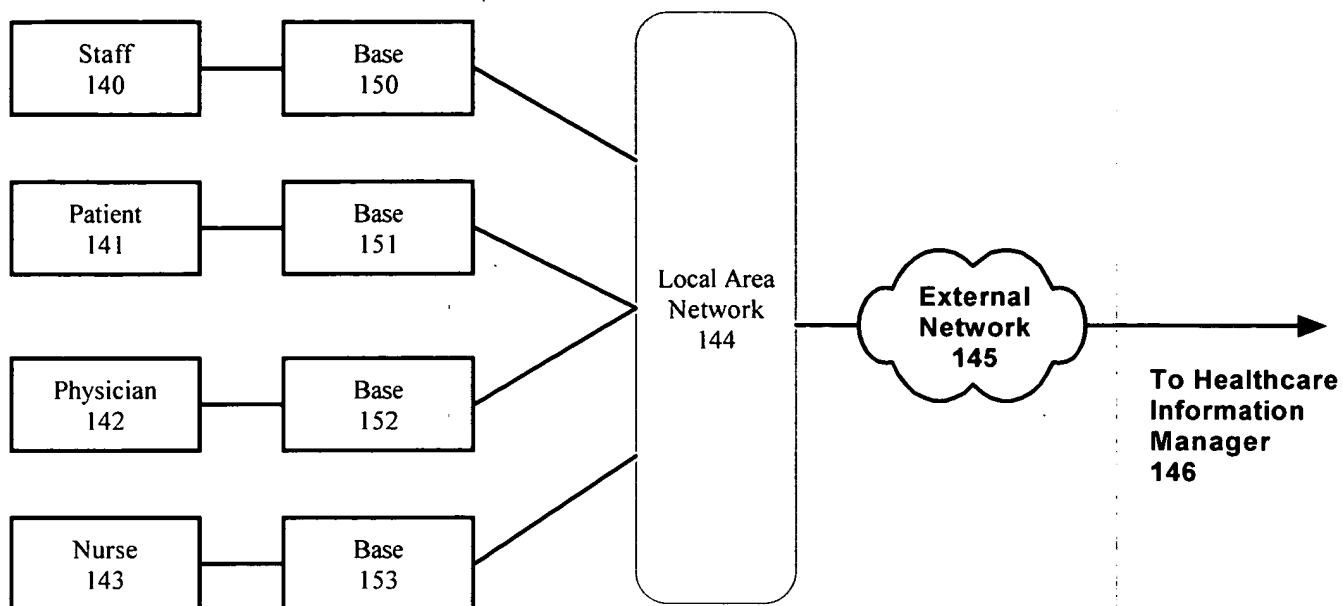
**Figure 5B**



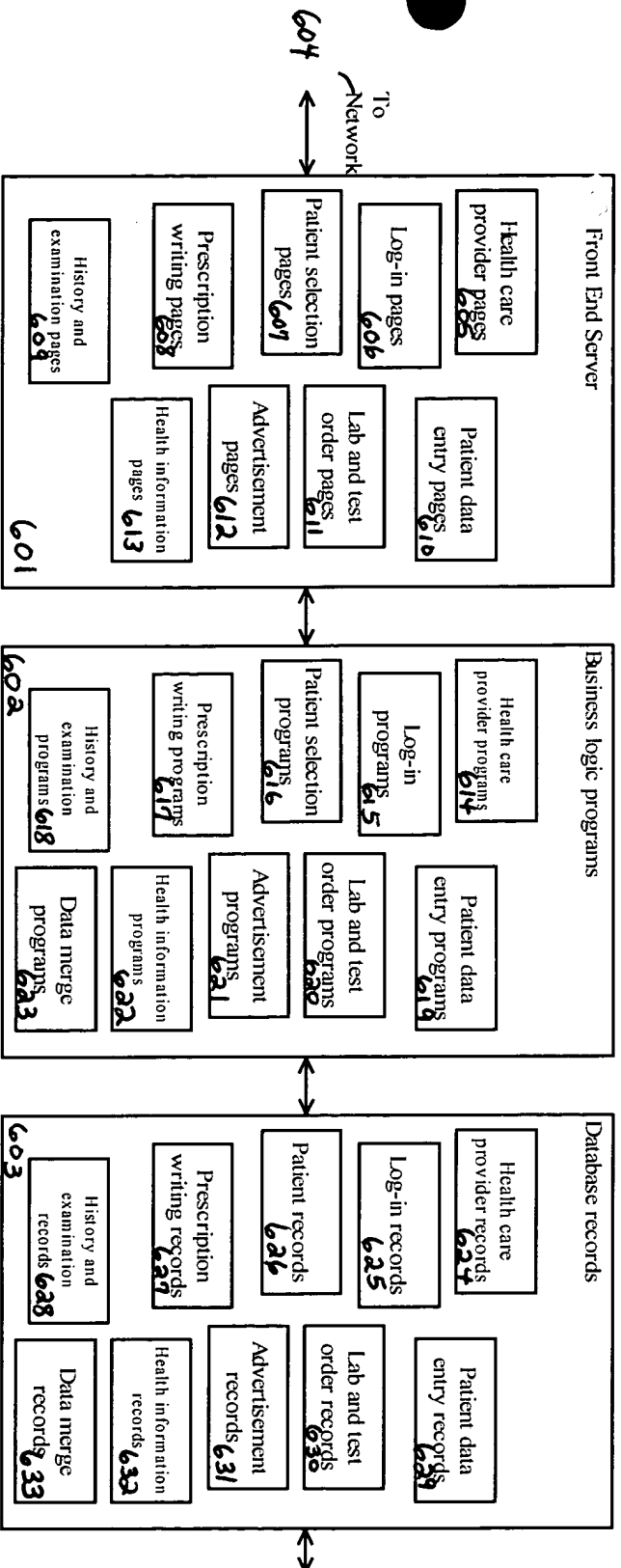
**Figure 5C**



**Figure 5D**



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Health Information Manager ~ 600

Figure 6

Figure 7

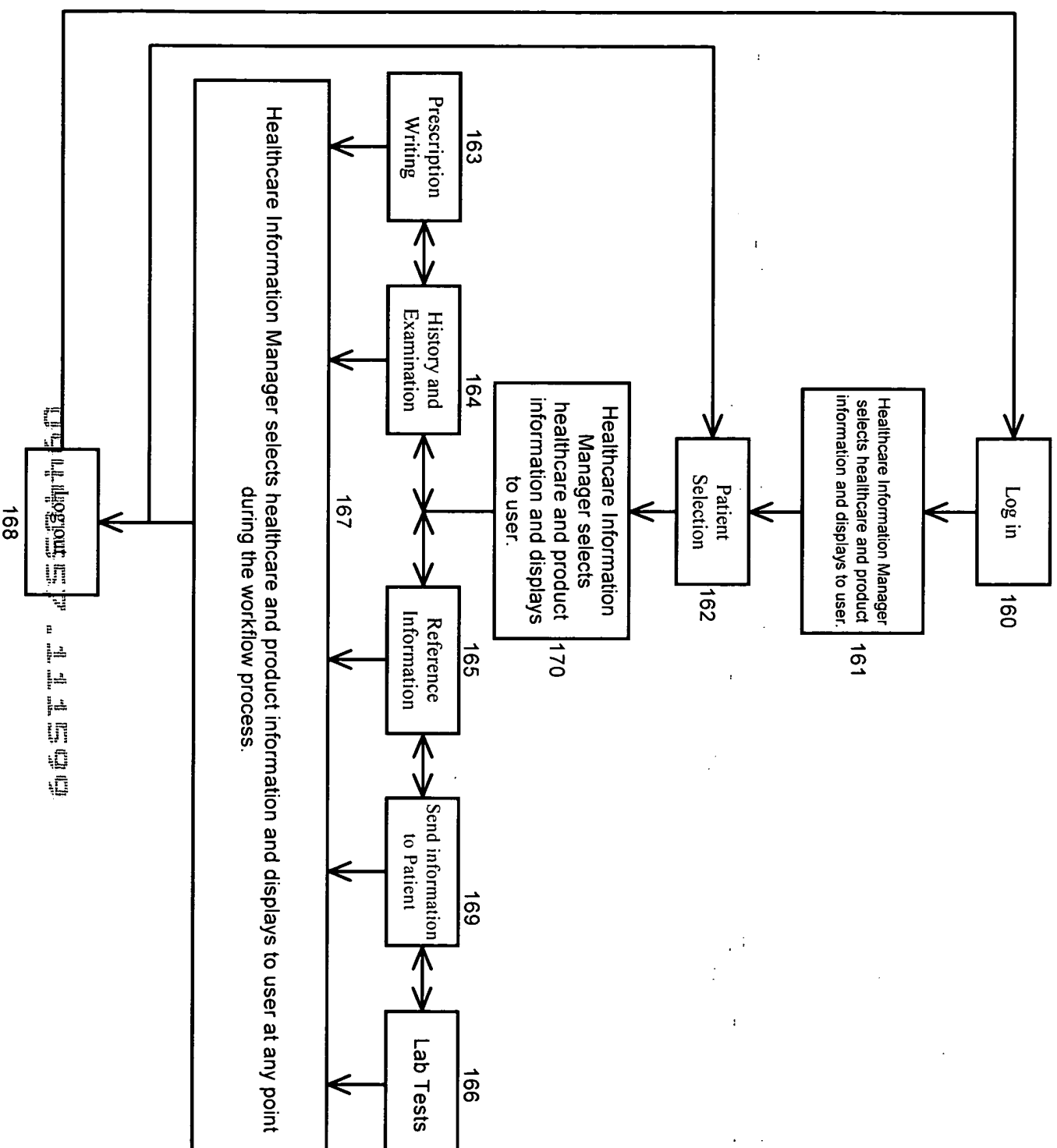
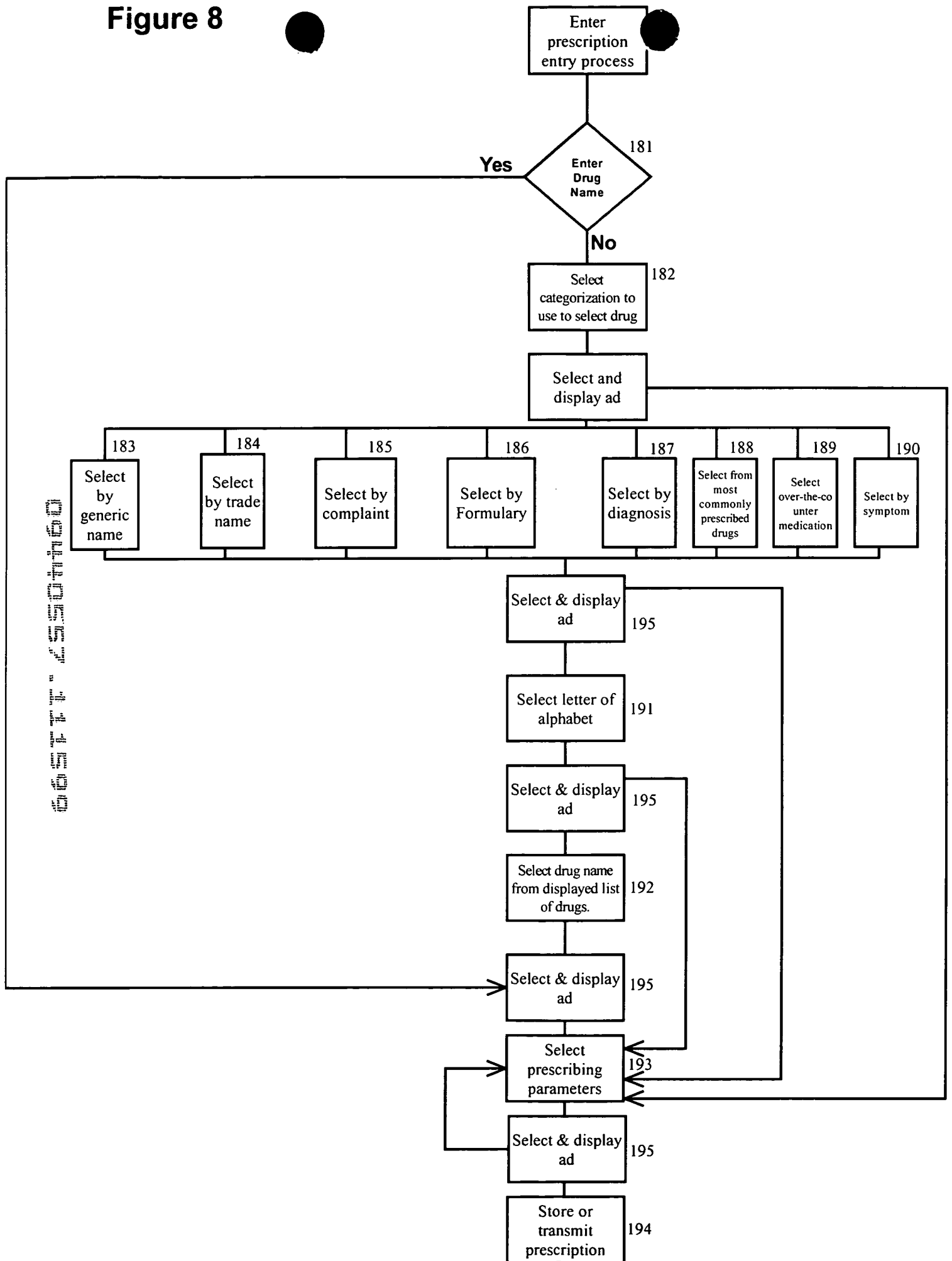
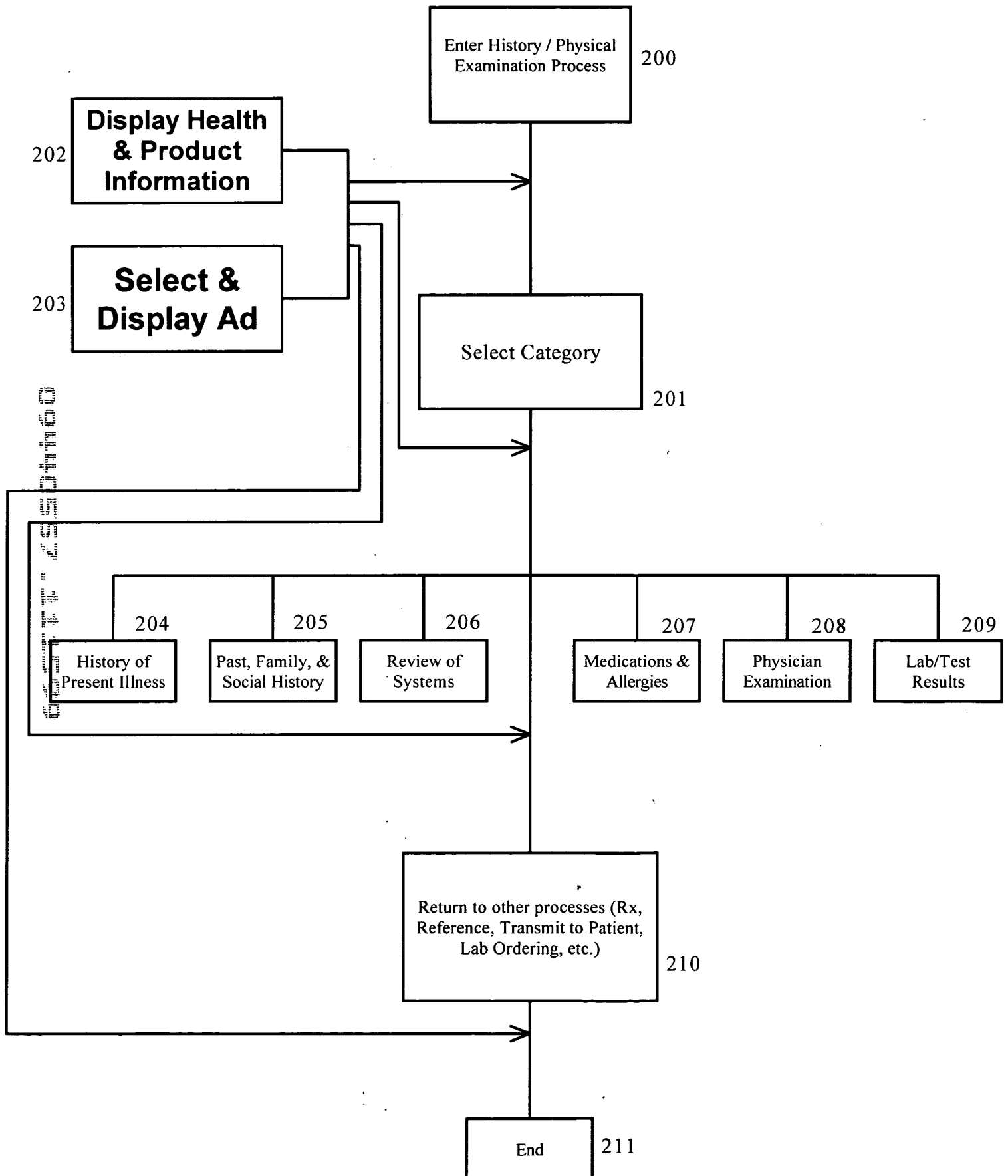




Figure 8



**Figure 9**



# Advertisement

## Patient Record: John Doe

AUSTIN REGIONAL HOSPITAL EMERGENCY PHYSICIAN RECORD		DOC # E.R.	
<b>Chief Complaint:</b> Vomiting/Diarrhea/Abdominal Pain			
<b>History of Present Illness:</b> Onset of symptoms approximately 12 hours prior to admission. Initial symptoms included nausea, followed by vomiting and watery, non-bloody diarrhea. Abdominal pain is localized to the right lower quadrant. No fever, chills, or recent travel.			
<b>Medications &amp; Allergies:</b> Medications: No regular medications. Allergies: No known allergies.			
<b>Review of Systems:</b> Constitutional: No weight loss, no fever. Hematologic: No bleeding or bruising. Cardiovascular: No chest pain or palpitations. Respiratory: No cough or sputum. Gastrointestinal: Nausea, vomiting, diarrhea. Musculoskeletal: No joint pain or swelling. Neurologic: No headache or dizziness. Endocrine: No excessive thirst or hunger. Skin: No rashes or lesions.			
<b>Past Family &amp; Social History:</b> Past Medical History: No chronic conditions. Social History: No tobacco or alcohol use. Family History: No family history of gastrointestinal disease.			
<b>Physical Examination:</b> Vital Signs: T 98.6°F, P 72, R 18, BP 110/70. HEENT: No abnormalities. Lungs: Clear to auscultation. Heart: Normal S1, S2. Abdomen: Soft, right lower quadrant tenderness. Rectal: No blood or mucus.		<b>Diagnosis:</b> Acute Gastroenteritis	
<b>Plan:</b> Supportive care, oral rehydration, and monitoring.		<b>Disposition:</b> Discharge with home care instructions.	

835

Figure 10

# Advertisement

## Diagnostic Results

[illegible]

EKG

Abnormalities:

EKG Normal

NSR

Normal Axis

Normal Intervals

Normal QRS

Normal ST/T

Discussed w/ Cardiologist

Repeat EKG: Time:

Unchanged

Changed:

C-Spine XRAY

Normal/NAD

Fracture

Epiglottitis WNL

Enlgd Epiglottitis

Soft Tissues WNL

Lesions/Nodes

Discussed with Radiologist

Other/Notes:

Figure 12

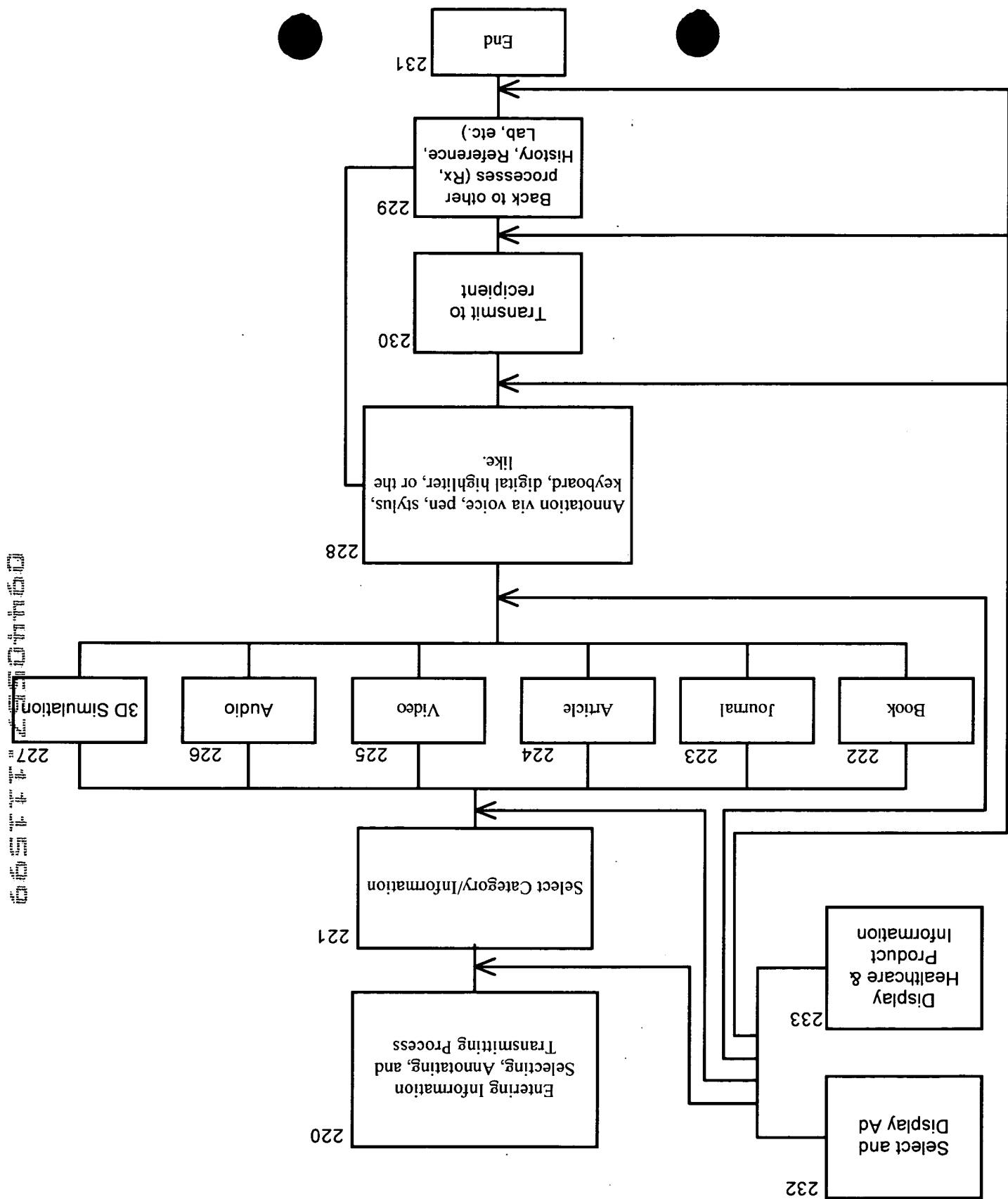


Figure 13

Flowchart of the process

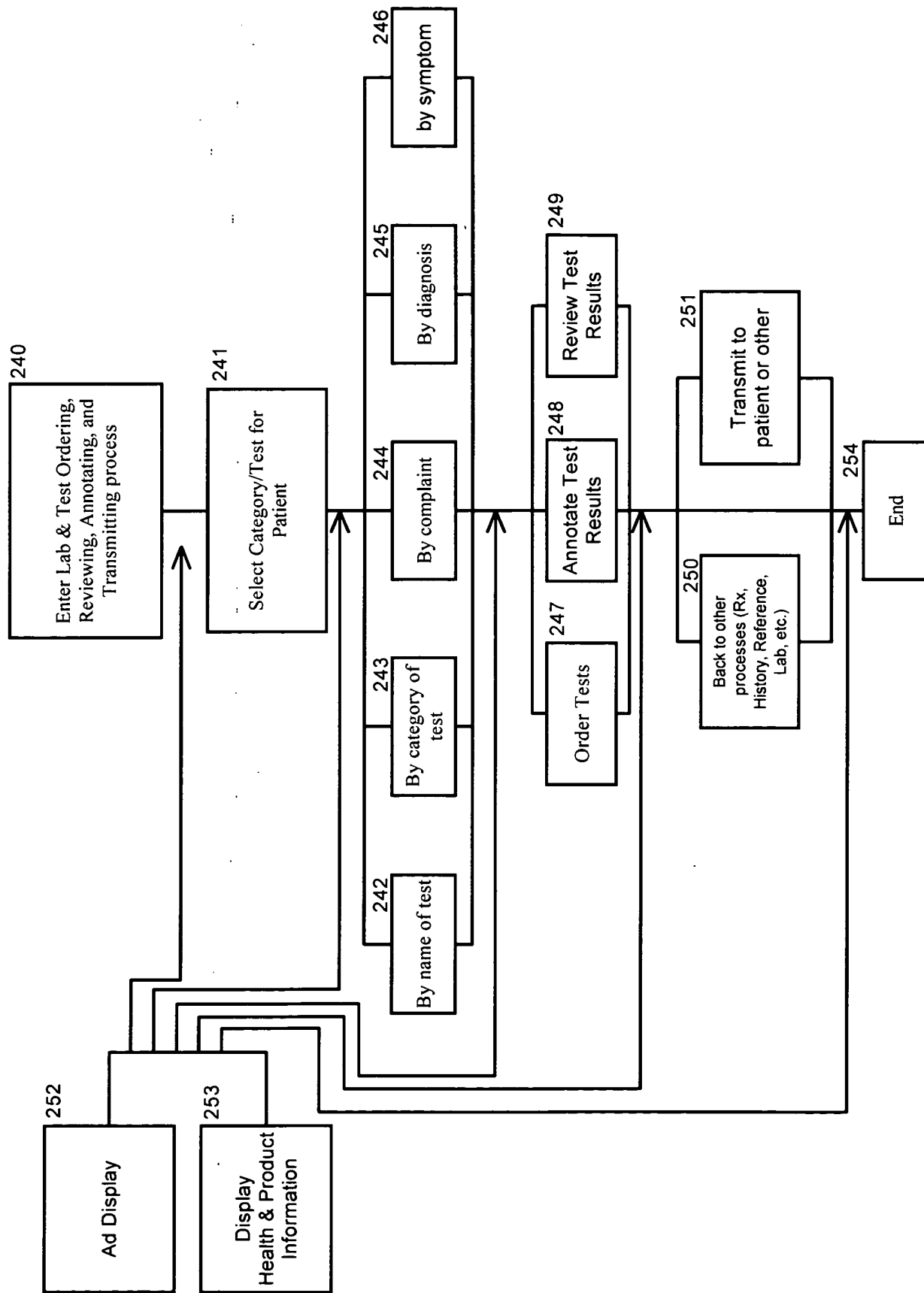
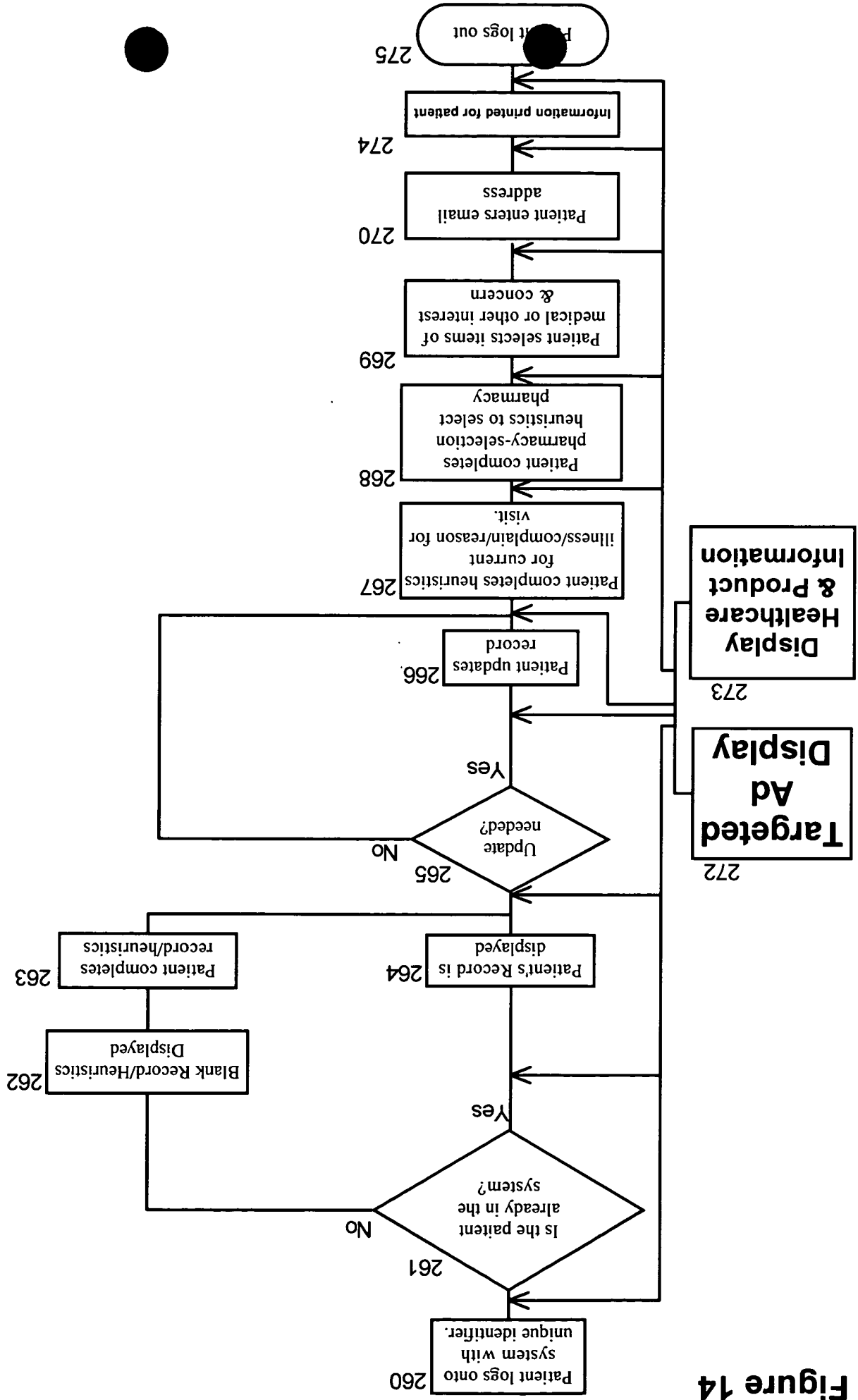


Figure 14



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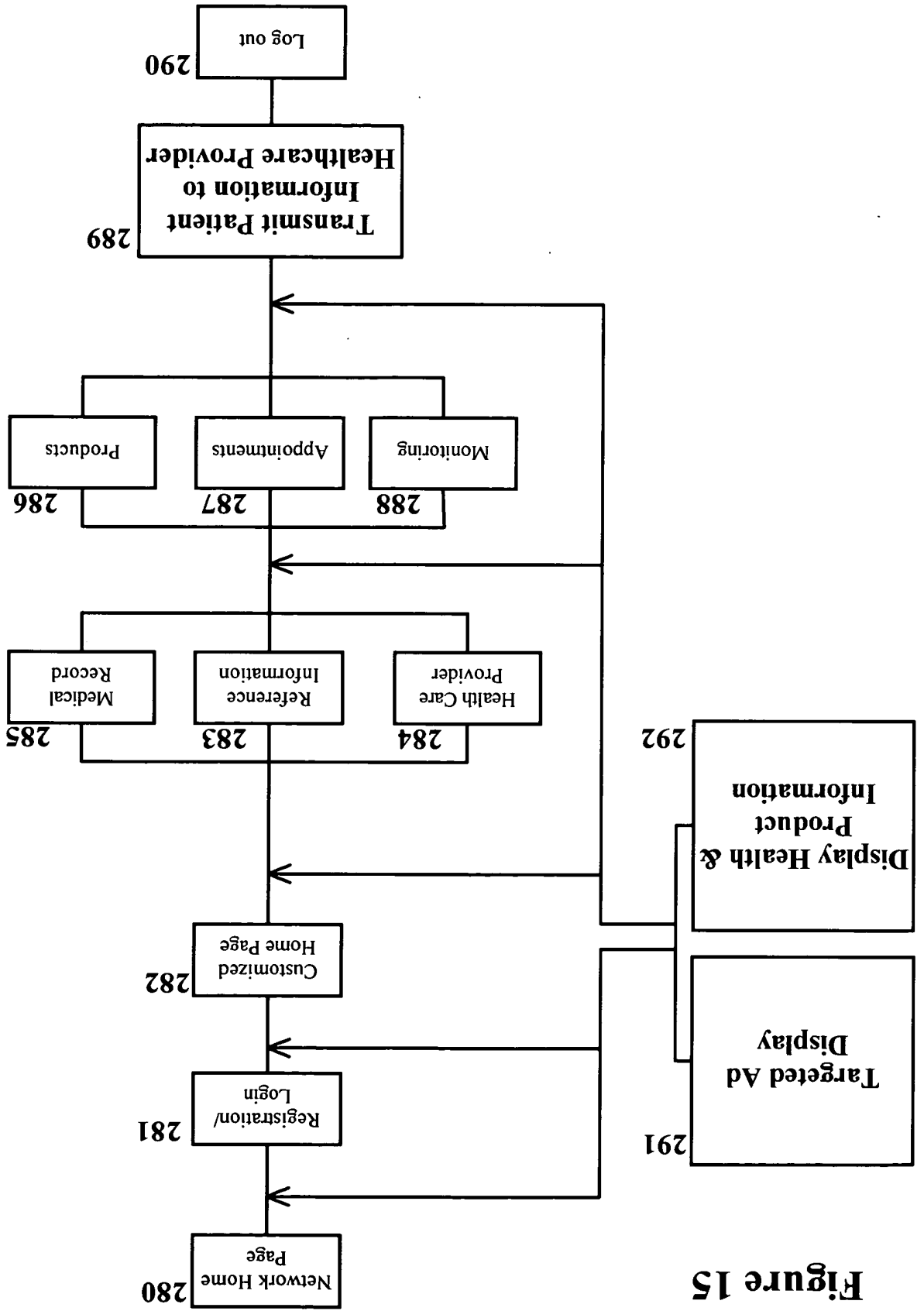




Figure 16

300

Determine the healthcare information, product information, and advertisements to display

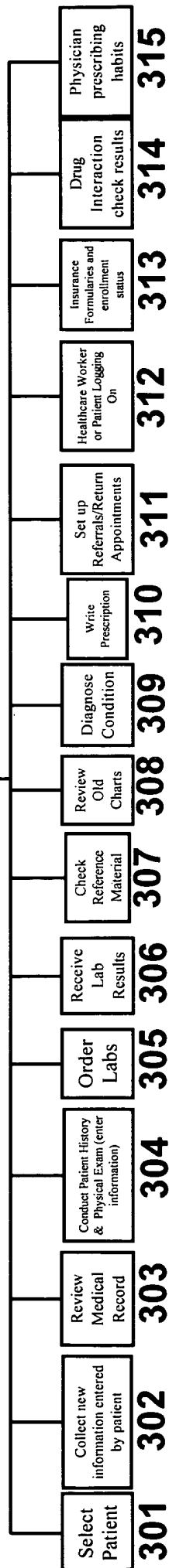
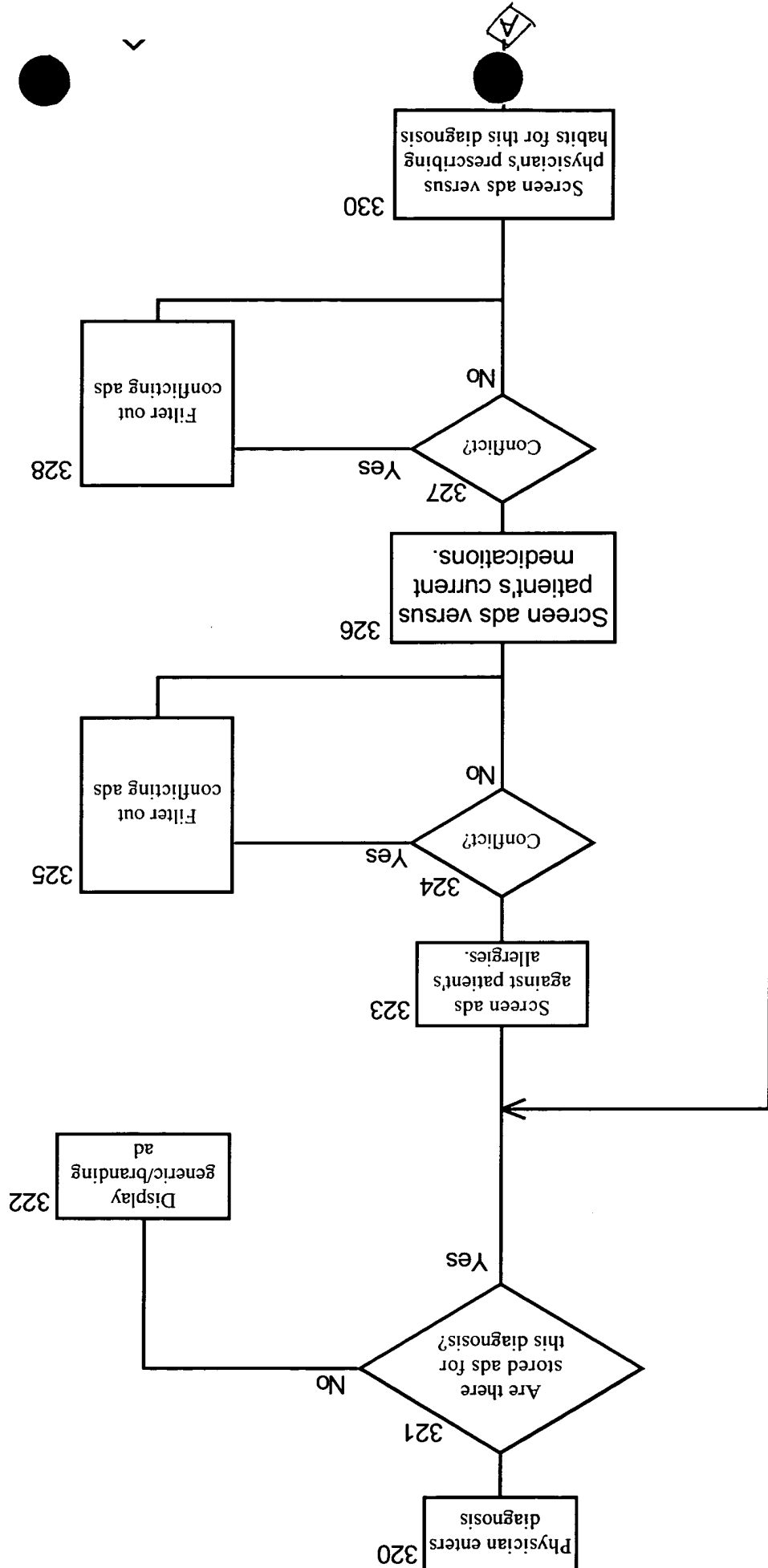


Figure 17



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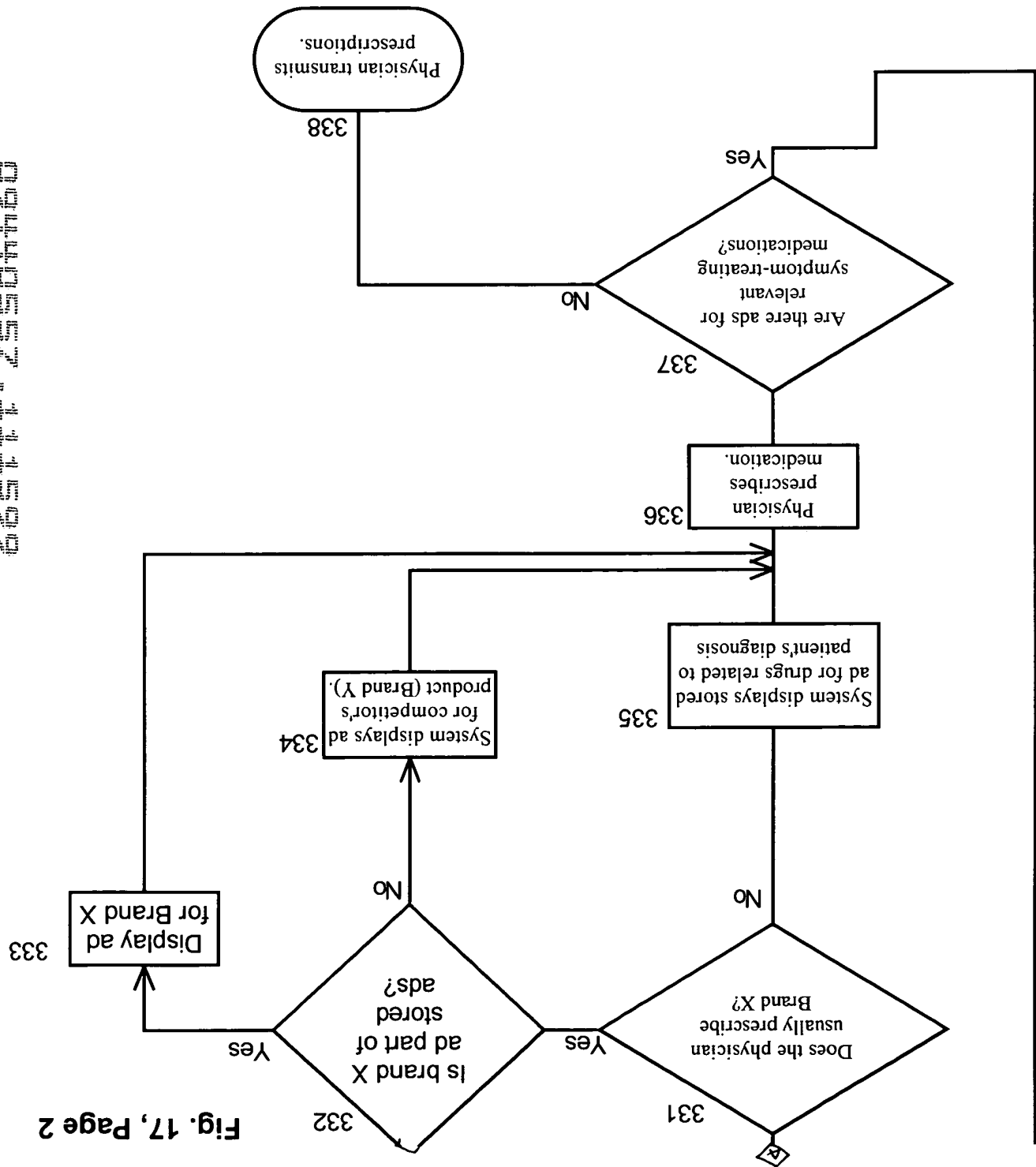
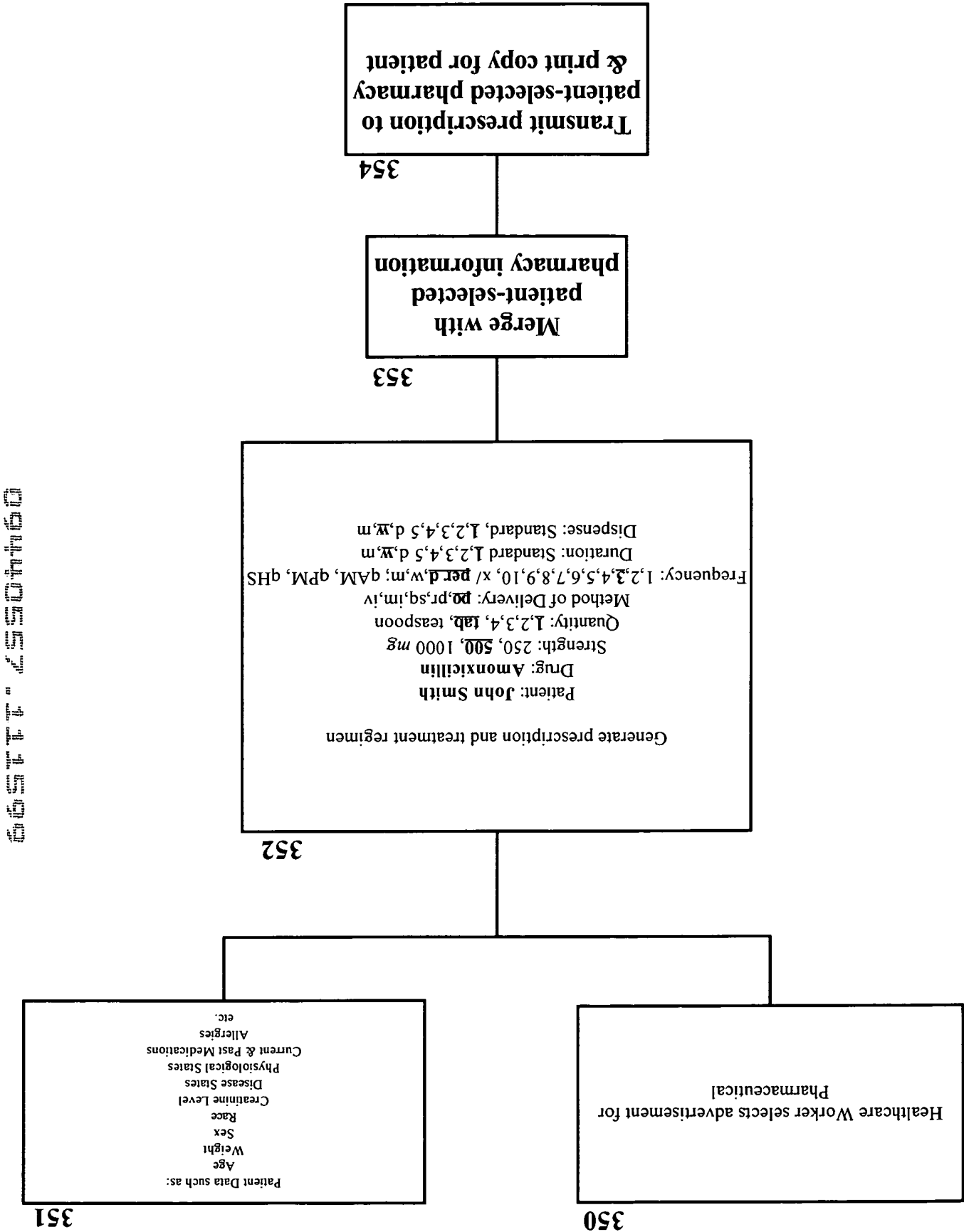


Fig. 17, Page 2

Figure 18A



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Figure 18B

Touch on the Strength, Quantity, Method of Delivery, Frequency, Duration, and Dispensing Level to select.

Patient: John Smith  
Drug: Amoxicillin  
Strength: 250, ~~500~~, 1000 mg  
Quantity: 1,2,3,4, ~~tab~~, teaspoon  
Method of Delivery: ~~po~~,pr,sg,im,iv  
Frequency: 1,2,3,4,5,6,7,8,9,10, x/ ~~per d~~  
Duration: Standard 1,2,3,4,5 d,w,m  
Dispense: Standard, 1,2,3,4,5 d,w,m

**COLEMAN**

Figure 19

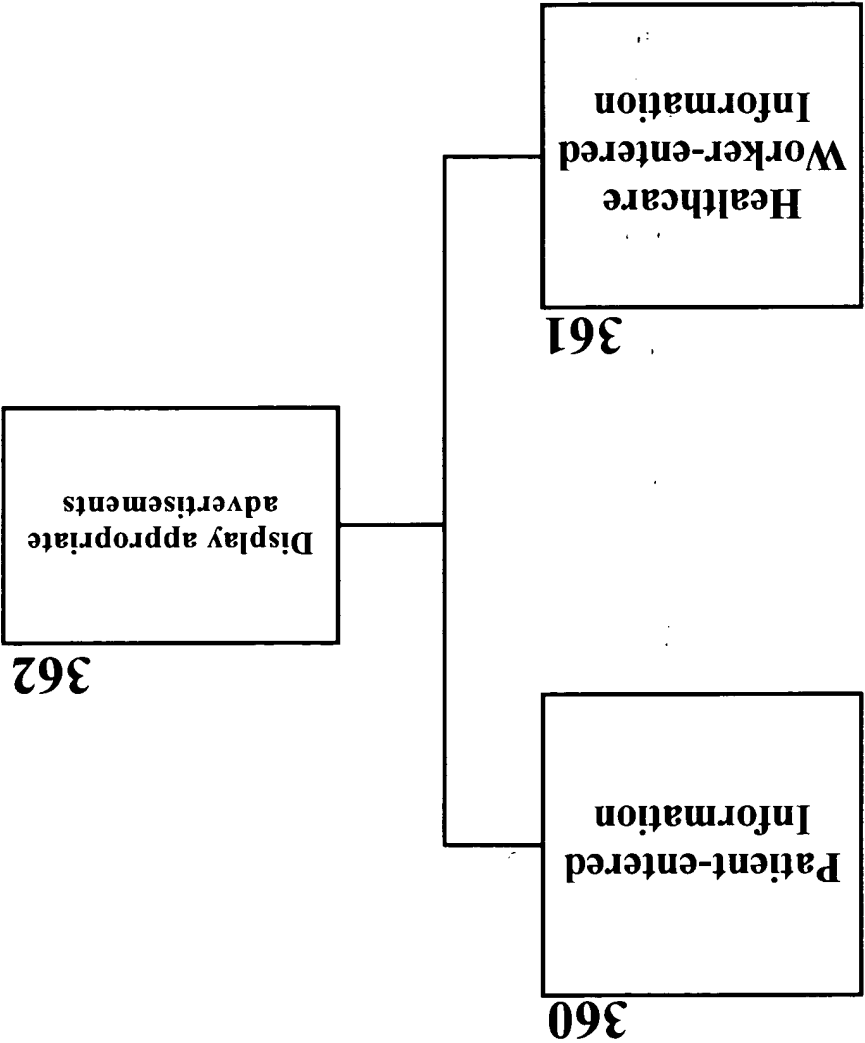
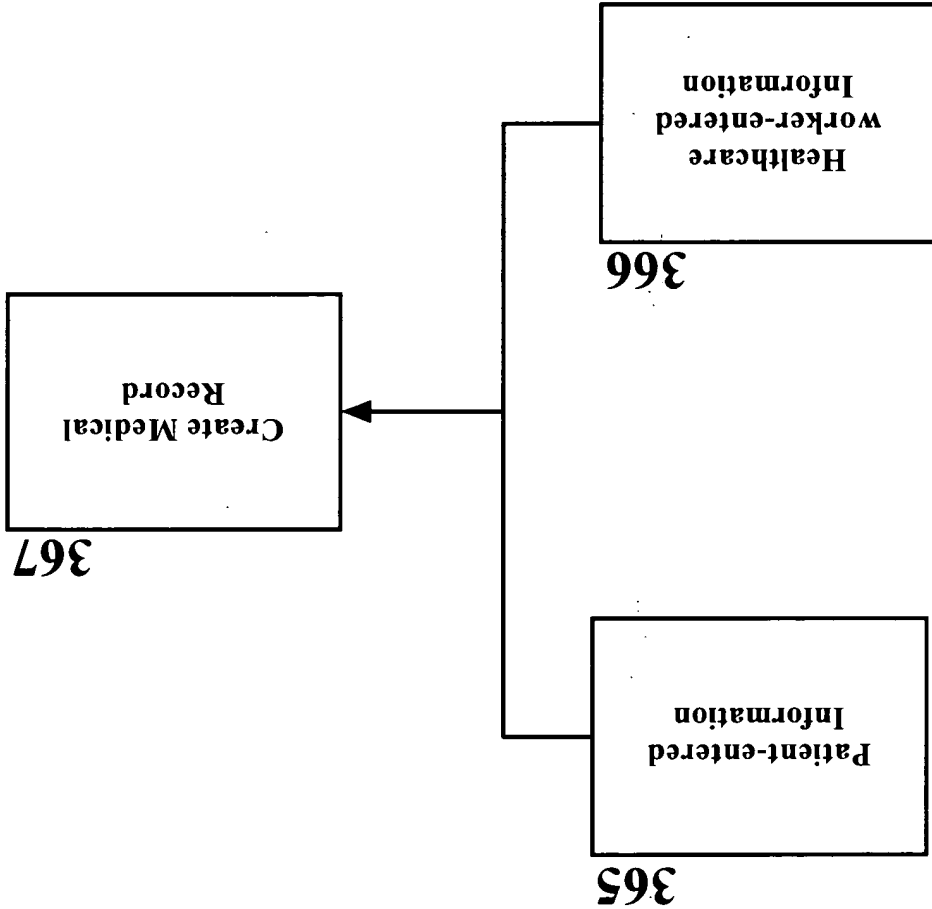
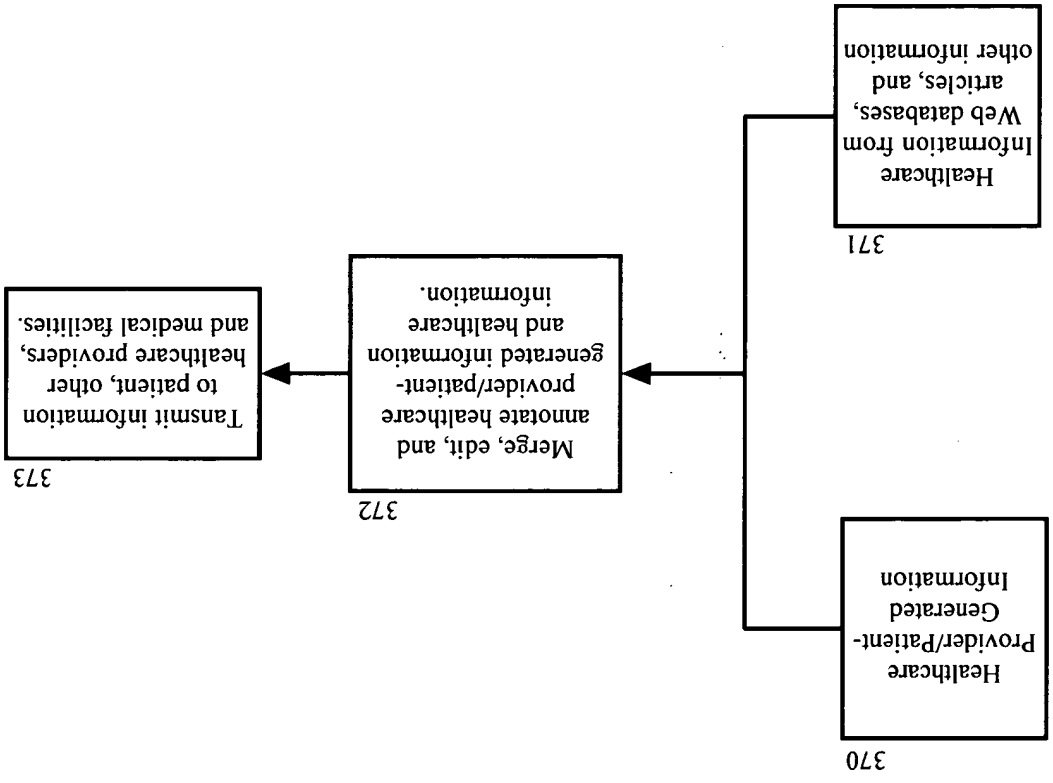


Figure 20



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Figure 21



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Figure 22A

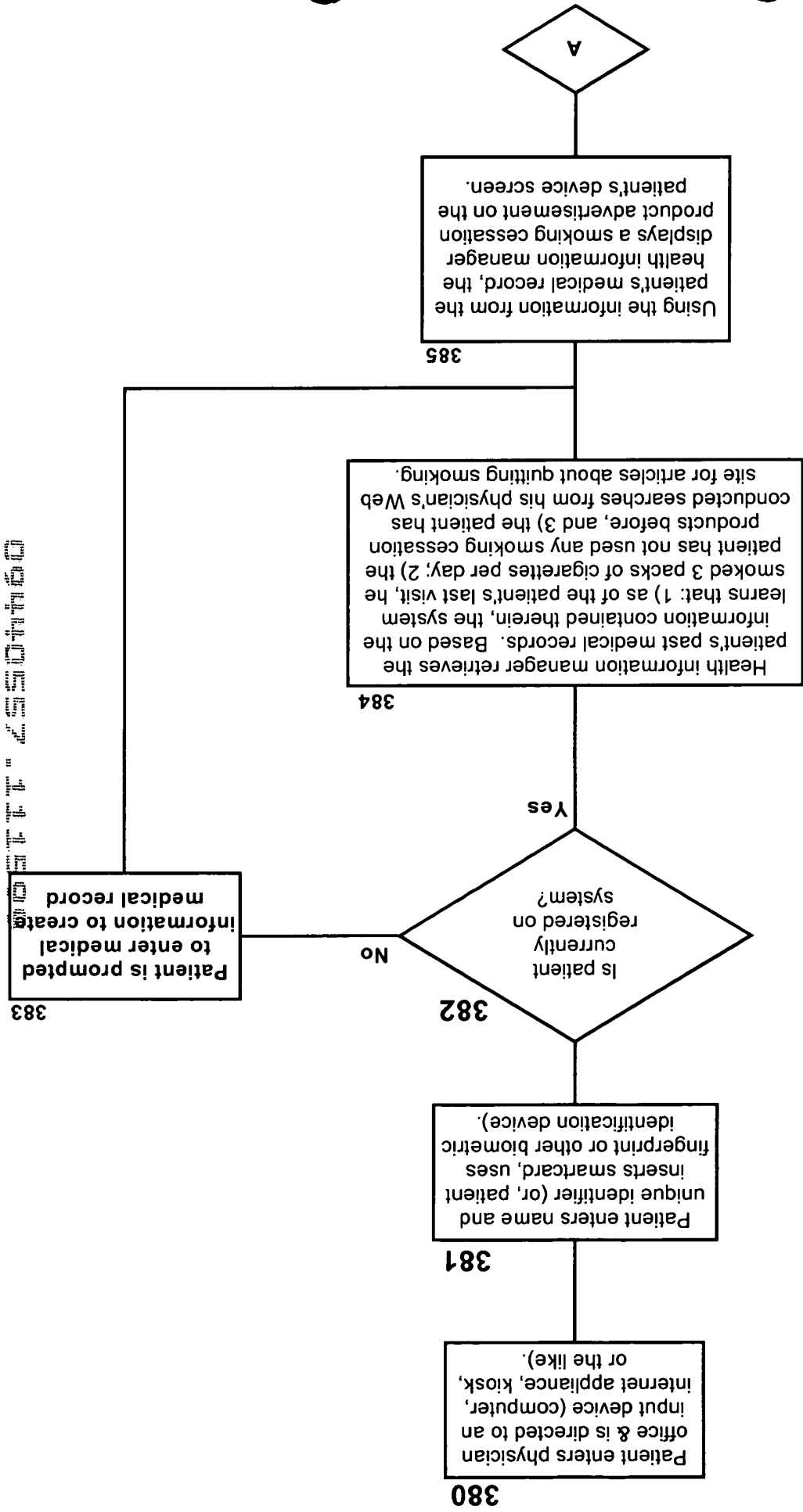


Figure 22B

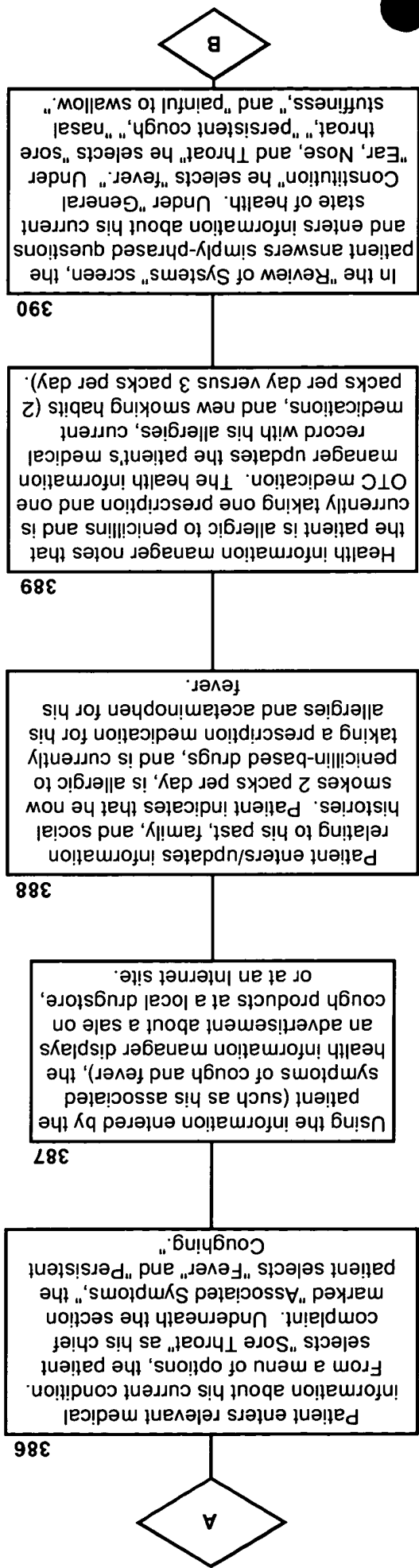
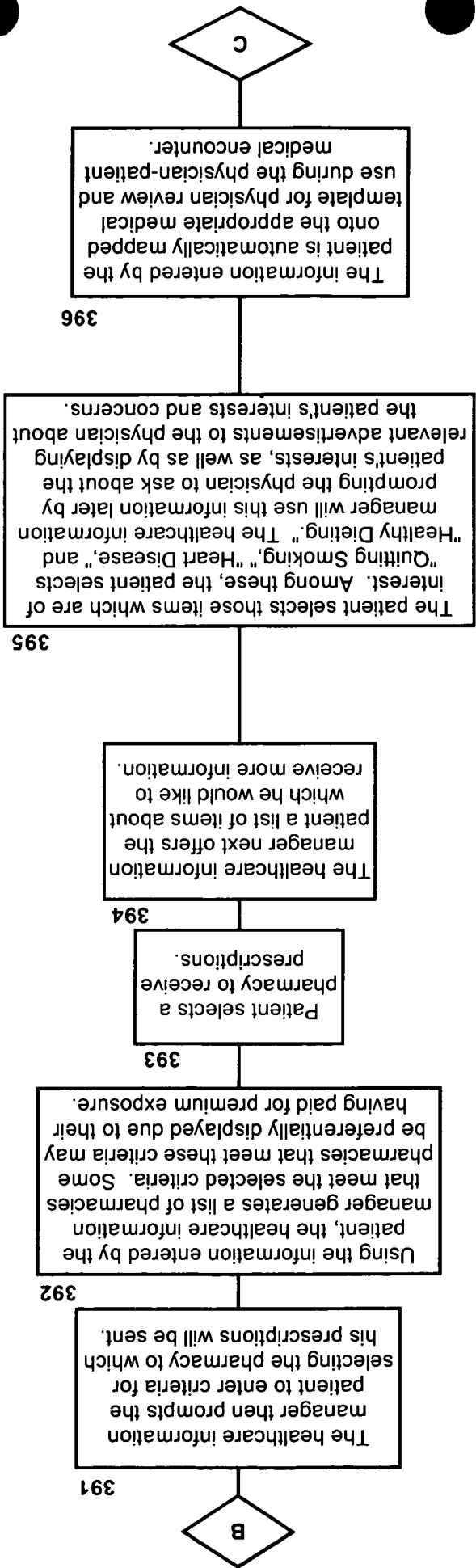
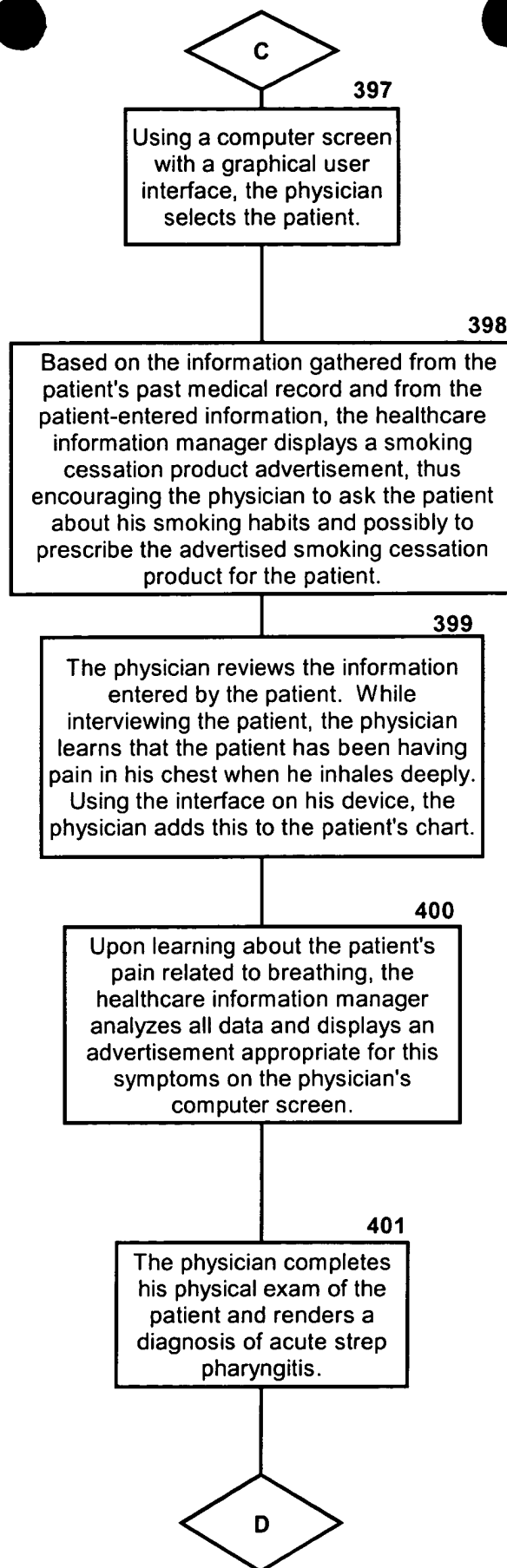


Figure 22C



Continued on next page

Figure 22D



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Figure 22E

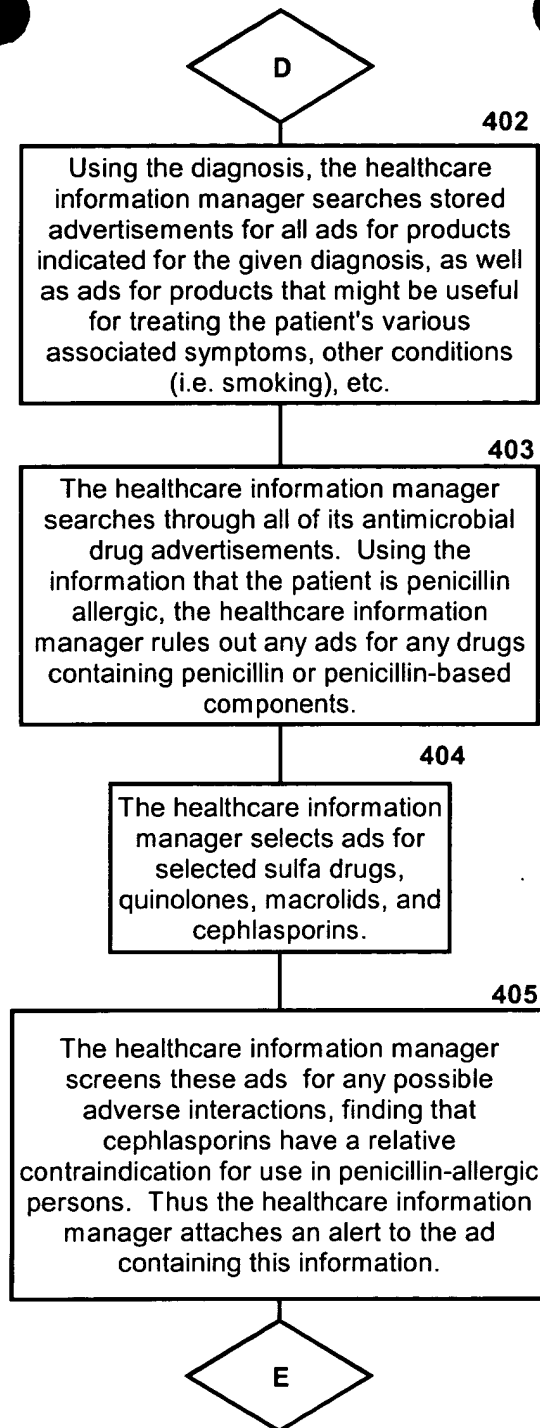
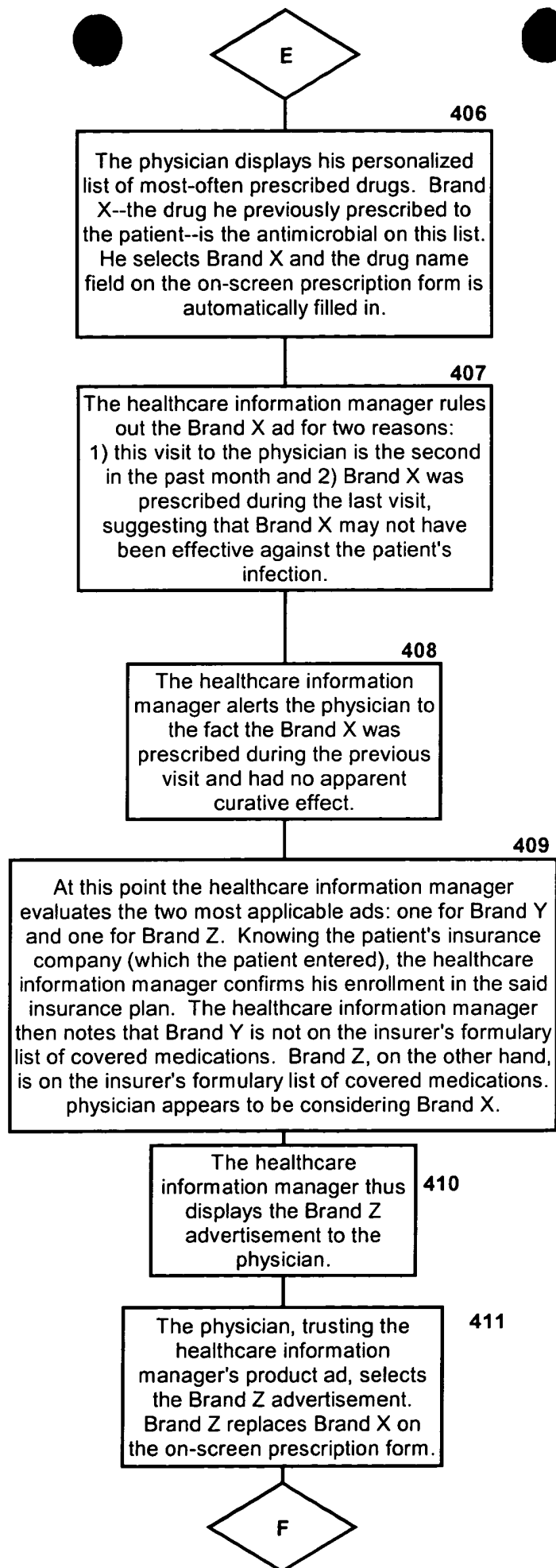
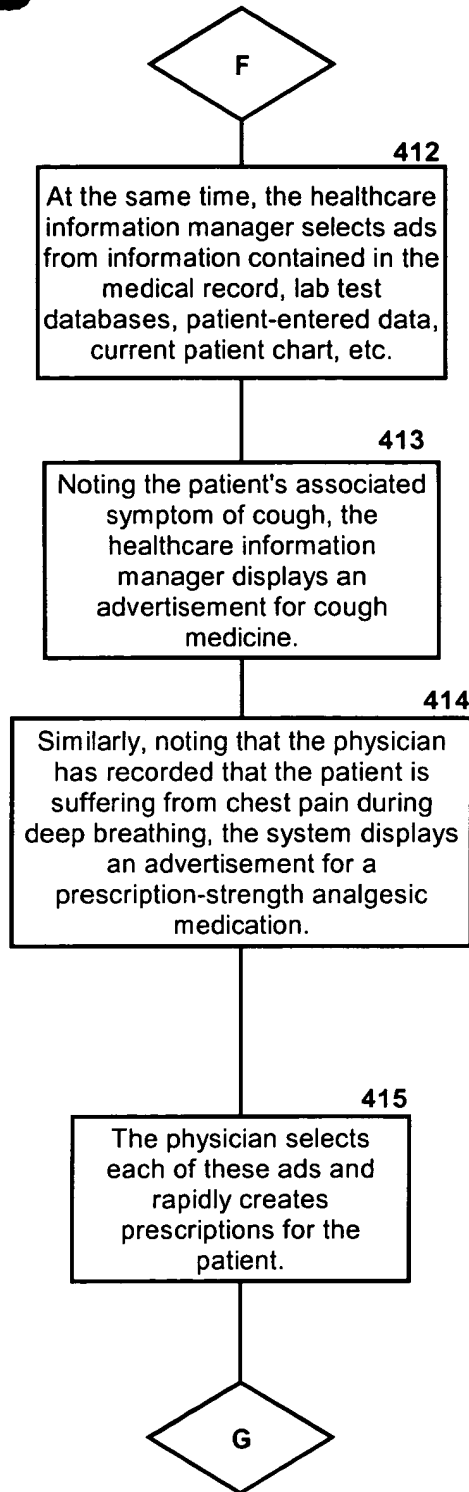


Figure 22F



U.S. PATENT & TRADEMARK OFFICE

Figure 22G



Copyright © 2000 by the American Medical Association

Figure 22H

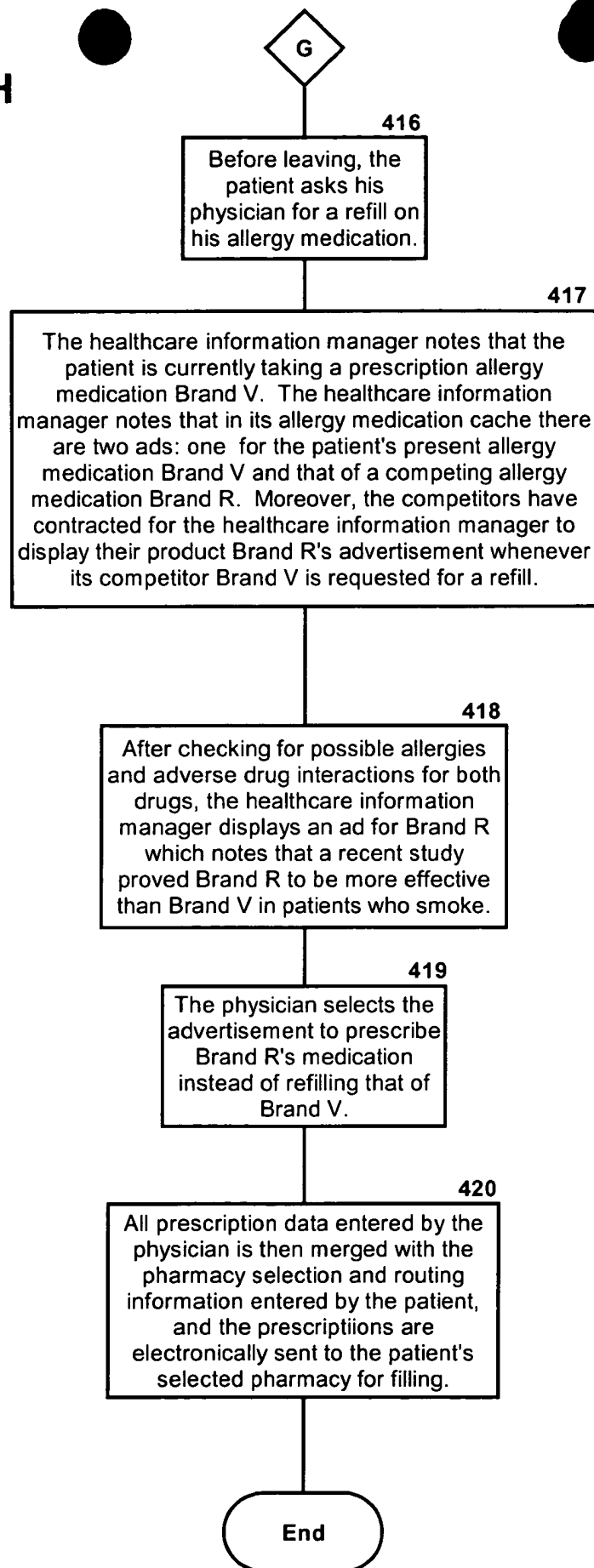




Figure 23

## Please select Pharmacy Options

### Advertisement

Here you search for a participating pharmacy that meets your particular needs. Simply select from any or all of the options below. The next page will show a list of pharmacies that match your requested options. The pharmacy you then choose will receive your prescription information electronically, making it easier for you to get the medicine your doctor may determine you need.

To select a particular item, touch the down arrow on the right and select your choice from the displayed list.

Then touch the CONTINUE button on the screen.

If you make a mistake and wish to clear your selections, touch RESET.

Pharmacy:

Select a Pharmacy

Area of Town:

Select Area of Town

Store Hours:

Select Store Hours

Delivery Options:

Select Delivery Options

Prescription Insurance:

Select Prescription Insurance

Continue

Reset

Figure 24

Please select a Pharmacy

Advertisement

The following pharmacies meet the requirements you requested:

Select	Pharmacy	Area of Town	Address	Store Hours	Delivery Options	Rx Insurance
<input checked="" type="radio"/>	Store A	Central	426 Main	24hrs	None	Co-Pay
<input checked="" type="radio"/>	Store B	Central	112 4th	24hrs	None	Co-Pay
<input checked="" type="radio"/>	Store C	Central	9815 Park	24hrs	None	Co-Pay

To select a particular pharmacy, touch the circular button to the left of the pharmacy's name

Then touch the CONTINUE button on the screen.

If you make a mistake and wish to clear your selections, touch RESET.

If you wish to change your options and search again, touch the BACK button.

Continue

Reset

Back

Figure 25

CONFIRMATION

529

## Your Pharmacy of Choice

### Advertisement

You have chosen the following Pharmacy to fill any prescriptions given to you today by your doctor.

To confirm that this is where you want your prescriptions sent, touch **CONFIRM**.

If you wish to change your options and search again, touch the **BACK** button.

Store A  
426 Main  
Austin, TX 78844  
(512) 555-5875  
Open 24 Hours

1st Street

Main

Park



530

Continue

Back

Figure 26

John Doe, Welcome from Dr. Smith

- Update your Blood Pressure
- Make an Appointment

New Report about Smoking and Heart Attacks!

[Click Here](#)

Targeted Advertisement

532

Today's Cardiology News:

[New Kind of Heart Surgery](#)

[The Best Way to Walk](#)

[New Study on Heart-Healthy Foods](#)

Academic Articles

[Outpatient Infusions Increase](#)

[Positive Outcomes for CABG](#)

[New role of lipids in CHF](#)

Books on the Heart

[Living Well with Hypertension](#)

[Running for Life: My Bout with MI](#)

[How Far We've Come: A Study of](#)

[Cardiac Theory from 1500-2000](#)

[Women at Risk: Women and](#)

[Carotid Dissection](#)

Targeted  
Advertisement

Targeted  
Advertisement

Figure 27

Copyright © 2003

533

Mr. Doe, please enter your blood pressure and click the  
GRAPH THIS ENTRY button:

Systolic

Diastolic

534

535

Graph This Entry

Figure 28

CONFIDENTIAL

November 2000  
John Doe's Blood Pressure Record

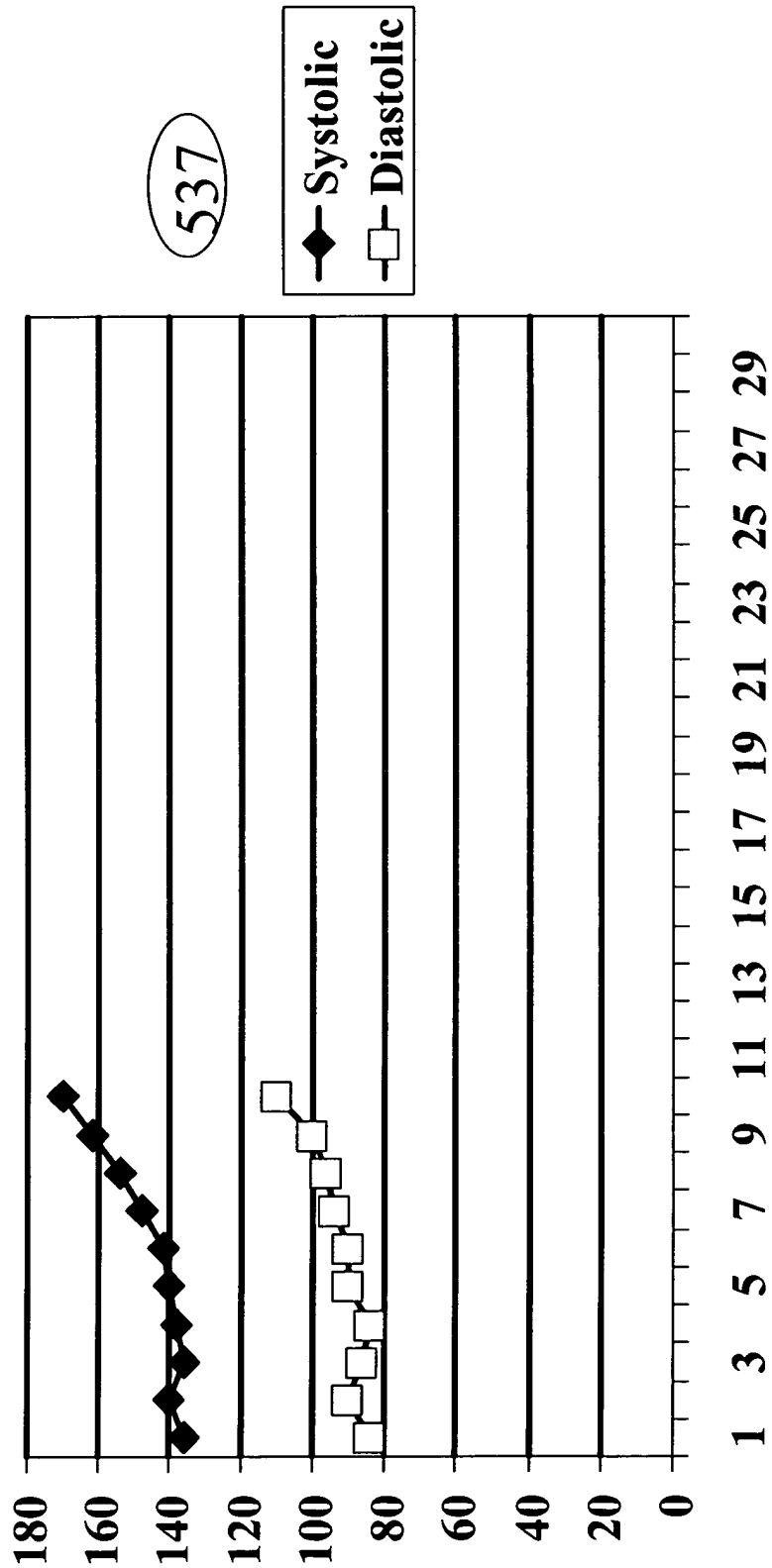


Figure 29

Mr. Doe, please select the title that most closely matches the problem you are having:

<input type="radio"/> Dental Pain/Problem	<input type="radio"/> Chest Pain/Discomfort	<input type="radio"/> Pain in Arm/Arms
<input type="radio"/> Dizziness	<input type="radio"/> Palpitations	<input type="radio"/> Pain in Upper Back
<input type="radio"/> Ear Pain/Problem	<input type="radio"/> Vision Problems	<input type="radio"/> Pain in Lower Back
<input type="radio"/> Headache	<input type="radio"/> Vomiting/Nausea/Diarrhea	<input type="radio"/> Pain in Leg/Legs
<input type="radio"/> Sore Throat	<input type="radio"/> Bloody Stool	<input type="radio"/> Pain in Foot/Ankle
<input type="radio"/> Cough/Congestion	<input type="radio"/> Abdominal (Belly) Pain	<input type="radio"/> Pain in Hand/Wrist

Then touch the CONTINUE button on the screen.

Continue

If you make a mistake and wish to clear your selections, touch RESET.



Reset

Figure 30

RESET" selection

539

Mr. Doe, please tell us about the chest pain you are having:

	
<b>How severe is your pain?</b>	<b>When did your pain begin?</b>
<input type="radio"/> Severe	<input type="radio"/> While sleeping
<input type="radio"/> Moderate	<input type="radio"/> While working
<input type="radio"/> Mild	<input type="radio"/> While exercising
<b>How long have you had this pain?</b>	<b>What makes the pain worse?</b>
<input type="radio"/> Minutes	<input type="radio"/> Movement
<input type="radio"/> Hours	<input type="radio"/> Exertion/Lifting
<input type="radio"/> Days	<input type="radio"/> Deep Breathing
	<input type="radio"/> Nothing
	<b>What makes the pain decrease?</b>
	<input type="radio"/> Movement
	<input type="radio"/> Rest
	<input type="radio"/> Deep breathing
	<input type="radio"/> Nothing

Then touch the SEND button on the screen.

Send

Reset

If you make a mistake and wish to clear your selections, touch RESET.



[illegible]

540

541

Figure 32

